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Thesis Title	Association of Anti Collagen Type II Antibodies, Zinc, and Selenium with Rheumatoid Arthritis			
Year	2022		CD: 1537	
Abstract	<p>Rheumatoid arthritis chronic autoimmune condition characterized by inflammation that contributes to the deterioration of joints, bones, tendons, and ligaments. Anticollagen type II antibodies are systemic inflammatory marker that can be used to predict events such as rheumatoid arthritis. Toxic and trace elements are among the several contributing factors proposed to participate in the pathogenesis of this disease.</p> <p>Objective:</p> <p>To evaluate the role of Anticollagen type II antibodies in rheumatoid arthritis patients and correlate that with disease activity score (DAS-28). In addition to studying the correlation of Anticollagen type II antibodies with zinc, selenium, C-Reactive Protein(CRP), and erythrocyte sedimentation rate (ESR) , and determine any possible association between these parameters, and between these parameters and the degree of disease activity (DAS-28).</p> <p>Subject and Method:</p> <p>This study was conducted at Baghdad Teaching Hospital and Ghazi Al-Hariri Hospital in the Medical City of Baghdad, Iraq, from November 2021 to March 2022. It included 100 Iraqi patients with rheumatoid arthritis, their age range from (20–71) years (74 female and 26 male) and 30 healthy subjects as a control (22 female, 8 male). Five milliliters of blood were aspirated from each control and patient subject, divided into two parts. The first one (3 ml) was transferred into a plain tube, the serum was then isolated by centrifugation for 10 minutes used for measurements of the Anticollagen type II antibodies,</p>			

zinc, selenium, and C-Reactive Protein(CRP). While the second part (2ml) was transferred to the tube-containing EDTA to be used for hematological measurement of the erythrocyte sedimentation rate (ESR). The Enzyme-Linked

Immunosorbent Assay (ELISA), Flame Atomic Absorption Spectrophotometry

(FAAS), and Grafite Furnace Atomic Absorption Spectrophotometry (GFAAS) were used to determine these parameters.

Results:









This study found that the levels of Anticollagen type II antibodies in patients with rheumatoid arthritis were significantly higher than in healthy controls.

While zinc and selenium levels were significantly lower in patients with rheumatoid arthritis ( $P > 0.05$ ). Anti CII had a statistically significant positive moderate correlation with ESR and CRP,  $r$  was 0.56 0.46,  $p$ -value 0.000 and 0.000, respectively, and a statistically significant positive strong correlation with DAS 28,  $r$  0.65 and  $p$ -value 0.000.

Conclusions:

Anticollagen type II antibodies can be considered an important parameter for the early detection of rheumatoid arthritis and can also be used

to determine the activity of rheumatoid arthritis. Low levels of Zinc and selenium may play a role in the incidence of rheumatoid arthritis and It may play a significant role in the development of rheumatoid arthritis itself.

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Thesis Title	The Role of Serum Levels of C-terminal telopeptide Type-I Collagen and Procollagen Type-I Nterminal Propeptide in Prediction of Early Osteoporosis in men Patients with type-2 Diabetes Mellitus			
Year	2022		CD1528	
cccdcdAbstract	<p>Background: Diabetes is a metabolic illness with numerous etiologies characterized by persistent hyperglycemia caused by abnormalities in insulin synthesis, insulin action, or both. Diabetes has been identified as a significant osteoporosis risk factor due to its multiple effects on the skeletal system and bone metabolism. Osteoporosis is a progressive skeletal condition that primarily affects postmenopausal women. Obesity is known as a common osteoporosis risk factor.</p> <p>Bones tissue is a living, porous, anisotropic material that undergoes constant modification via a process known as bone remodeling. The Procollagen Type I Nterminal Propeptide and C-terminal telopeptide Type-I Collagen are produced during bone remodeling and serve as bone turnover markers. Early identification of bone mass loss in Type -2 diabetic patients may help reduce bone loss and future fracture risk.</p> <p>Objectives: The study aims to develop a practical model for screening of bone turnover state in patients with diabetes (type2) and evaluate its clinical usefulness in identifying diabetic osteopathy. The secondary aim is to investigate whether obesity in people with type 2 DM affects fracture risk, BMD, and bone quality parameters.</p>			

Subject, Material, and. Methods: In this case-control study, one hundred twenty men aged from forty to sixty-nine were divided into main categories.: type 2DM (n=80) and healthy control (n=40), Serum samples were analyzed for fasting blood glucose, calcium, alkaline phosphatase Albumin and whole blood to assess HbA1C by using automation (cobs 111). Procollagen Type I N-terminal Propeptide and C-terminal telopeptide Type-I Collagen levels in serum were determined using ELISA kits, and PTH using (Cobas e 411). Participants had their BMD measured at the lumbar spine using (DEXA).

Results: In the Type 2DM group, the mean ( $\pm$ SD) values of serum Procollagen Type -I N-terminal Propeptide and C-terminal telopeptide Type-I Collagen levels II were significantly lower than the healthy group ( $p < 0.000$ ,  $p < 0.000$ , respectively).

In two groups, serum Procollagen Type- I N-terminal Propeptide and CTX-1 levels had almost no significant correlation with age, FBS, or HbA1C. In both groups, there was a significant positive correlation between C-terminal telopeptide Type-I Collagen and Procollagen Type I N-terminal Propeptide, with  $p < 0.000$  and  $P < 0.000$ , respectively. They had no significant difference in Spine BMD; T-score had a p-value of 0.27, 0.37 and no correlation between these marker (P1NP, CTX-1) with body mass index  $p < 0.43$  and  $P < 0.07$  respectively .

The Conclusion: Men with T2DM had a lower bone turnover and worse bone quality than those in control. Bone turnover marker best adopt bone turnover criteria as a proactive examination to diagnose the internal structure of bone quality and early detection of bone mass loss before osteoporosis occurs.

Fractures may be predicted by bone turnover marker independently of bone mineral density.

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Thesis Title	Evaluation of Lactate Dehydrogenase and other Biochemical Markers in a Sample of Iraqi Patients with COVID-19 and Associated Comorbidities			
Year	2022		CD: 1529	
Abstract	<p><b>Background:</b> Coronavirus disease 2019 (COVID-19) is an emerging zoonosis caused by Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). Disease resulting from infection with SARS-CoV-2 was first reported in wuhan, china in december 2019, and the virus rapidly spread to other regions of the world there after. the world health, organization labeled the coronavirus illness 2019 (COVID-19) a pandemic on March 11, 2020. The presence of comorbidities raises the probability of infection and worsens the disease prognosis hypertension, cardiovascular disease, and diabetes are the most common comorbidities documented among Covid-19 patients several clinical laboratory parameters have been reported to be associated significantly with coronavirus disease 2019 (COVID-19) severity. The aim of this study: This study was designed to measuret of serum glucose , BUN , creatinine , BUN/Cr ratio , albumin ,CRP level, lactate dehydrogenase (LDH) activity, ferritin level, plasma d-dimer level to evaluate the levels of each one of the studied parameters between patients infected by coronavirus COVID-19 and no associated comorbidities and patients infected by coronavirus COVID-19 with</p>			

associated comorbidity (diabetes , hypertension, ischemic heart diseases, cancer), as well as finding the correlations between the values of the studied laboratory parameter.

**patients and Methods:** The study involved 175 patients the range of the age between (30-75 years). During infected by COVID-19 and the Patients were subdivided according to comorbidities : Group 1: 40 patients infected by COVID-19 with no associated comorbidities Group 2: includes 35 patients with a history of ischemic heart diseases. Group 3: 35 patients with a history of diabetes mellitus, Group 4: 35 patients with a history of hypertension, Group 5: 30 patients with a history of cancer. Serum from each patient and control was used for measure of glucose, BUN, creatinine, BUN/Cr ratio, albumin, CRP level, lactate dehydrogenase (LDH) activity, ferritin level, plasma d-dimer level.

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**Result:** A statistically significant difference in mean  $\pm$ SD value of glucose ( $p < 0.00$ ), BUN ( $p < 0.00$ ), S. creatinine ( $p < 0.00$ ), CRP ( $p < 0.00$ ), D-dimer ( $p < 0.00$ ), ferritin ( $p < 0.00$ ), LDH ( $p < 0.00$ ), were significantly increased in COVID-19 patients with comorbidities compared with COVID-19 patient without comorbidities. while the mean  $\pm$ SD value of albumin was significantly decreased ( $p < 0.00$ ) in COVID-19 patients with comorbidities compared with COVID-19 patients without comorbidities.

And also, no statistically significant differences in mean of BUN/s.cr between the groups, (  $p$ -value 0.259). There was important significant positive correlation between D-dimer and LDH in IHD group of patients ( $r$  0.34,  $p$ -value 0.03), negative correlation between LDH and albumin ( $r$  - 0.36,  $p$ -value 0.03), positive correlation between LDH and BUN/S.cr ( $r$  0.35,  $p$ -value 0.03) in HTN group of patients. also, no statistically significant association between any of studied markers in DM group.

**While positive correlation between CRP and glucose in cancer group.**

**Conclusion: There is a relationship between the results we obtained for most laboratory parameters such as (glucose, blood urea nitrogen, serum creatinine, C-reactive protein, D-dimer, ferritin, lactate, albumin ) and the diseases associated with COVID-19 patients such as (diabetes , hypertension, ischemic heart diseases, cancer),and significant differences were obtained groups, where the levels of glucose, urea nitrogen, serum creatinine, C-reactive protein, D-dimer, ferritin, lactate dehydrogenase were high, as well as the low level of albumin for covid-19 patients with comorbidities when compared with covid-19 patients without comorbidities. a significant and clear difference was observed in most laboratory parameters of cancer patients as well as IHD patients and to a lesser extent each of DM, HTN, respectively when compared with patients without comorbidities. These biochemical markers can assist in the planning and management of COVID-19 patients with comorbidities**

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Thesis Title	ELDERLY PATIENTS' ADHERENCE TO MEDICATIONS IN PRIMARY HEALTHCARE CENTERS			
Year	2022		CD: 1430	
Abstract	<p><b>Background:</b> currently the Elderly population is rapidly increasing and with this increment comes more challenges for the healthcare system, non-adherence to medications especially in elderly can lead to economic and human lost that is avoidable by improving patients' compliance and address the related issues leading to the non-adherence.</p> <p><b>Objectives:</b></p> <ul style="list-style-type: none"> <li>• Determination of the adherence level among elderly patients in Baghdad city .</li> <li>• Determination of the association of the levels of adherence with sociodemographic factors and other medical conditions.</li> <li>• Exploration some of the difficulties elderly patients face that hinder proper adherence.</li> </ul> <p><b>Methodology:</b></p> <p>A cross sectional study was conducted in primary healthcare centers in Baghdad Iraq from 1st of April 2020 to 30th of November 2020 targeting geriatric age group both genders attending the primary healthcare centers and having at least one diagnosed chronic disease, the study enrolled 10 healthcare centers from both sides of Baghdad. Patients were directly interviewed and data was collected using a questionnaire .</p> <p><b>Results:</b></p>			



**The current study showed that (83.4%) of the sample (n=385) had low adherence level, this rate tend to increase as the age increases, no significant association was found with gender , and a significant association was found with the age .**

**Conclusions:**

**Elderly patients attending the primary healthcare centers in Baghdad during the period of this study have low level of adherence . Patients who scored low level of adherence tend to pay more visits to the healthcare centers.**

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Thesis Title	Correlation of inter-ictal EEG localization with semiology and MRI in symptomatic focal epilepsies			
Year	2018		CD: 1431	
Abstract	<p>Symptomatic epilepsy is that of an acquired or genetic cause, associated with anatomic or pathologic abnormalities, and / or clinical features. The inter-ictal EEG findings of a Partial symptomatic epilepsy may include background EEG abnormalities, focal slowing in addition to EDs which may localize to the site of cerebral lesion. Seizure semiology may provide a valuable information on the seizure onset zone and thereby seizure localization.</p> <p><b>Objectives:</b> To determine how accurate that the routine interictal EEG can reveal epileptiform changes in correlation with that of MRI and semiology localization to recognize the utility of this mean for localization of epileptogenic lesions in less time and cost.</p> <p><b>Methods:</b> Seventy patients with the diagnosis of symptomatic focal epilepsy were enrolled in the study. Basic but prolonged (60 minutes) inter-ictal EEG was performed according to American Clinical Neurophysiology Society standards. Partial sleep deprivation was requested for all of the patients as one of provocation method in addition to hyperventilation and intermittent photic stimulation. EEG was reviewed using rules of phase reversal and dipole modeling for the purpose of localization. Semiology was analyzed by revising history that is sometimes aided by home videos. Then assorted according to seizure types to perform localization also.</p> <p><b>Results:</b> There was a statistically significant association between interictal EEG and sites of epileptogenic lesion, and most frontal and temporal lobe lesions were localized to the lesional lobe, 10 (50.0%) and 16 (57.1%) respectively, while</p>			

**Parieto-occipital lesions had interictal EEG with extralesional abnormalities 8(66.7%) and the majority of multilobar lesion had their EEG abnormalities lateralized to the same side of the lesions 9 (90.0%).**

**Lesions that were showed to be localized by interictal EEG were also localized in semiology in 24 (58.5%). but there were 10 (24.4%) and 7 (17.1%) extralesional and generalized, respectively on interictal EEG.**

**There was mild correlation and agreement between the two tests, but it was statistically significant.**

**Conclusion:**

**Inter-ictal sleep deprivation EEG can have an important role in localization and tracking of epileptogenic pathways and the concept of being discordant from semiology should have a crucial attention.**

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Thesis Title	Effect of Hypothyroidism on Ovarian Reserve Status in Iraqi Women: Hormonal Study			
Year	2022		CD: 1532	
Abstract	<p><b>Background:</b> Hypothyroidism is a clinical syndrome that is prevalent in women, even in those of reproductive age. Ovarian reserve can be defined as the number and quality of follicles in the ovary at any given time. Evaluation of ovarian reserve is recommended for patients who are at risk of decreased ovarian reserve.</p> <p><b>Objective:</b> The aim of this study is to evaluate the effect of hypothyroidism on ovarian reserve in Iraqi women by hormonal measurements of serum antimullerian hormone (AMH) , inhibin B, follicle stimulating hormone (FSH) and luteinizing hormone (LH).</p> <p><b>Subjects and methods:</b> This case –control study was carried out at the Department of Biochemistry, College of Medicine, University of Baghdad, in collaboration with Endocrinology and Diabetes clinic, Baghdad teaching Hospital, and National center for Teaching Laboratories, Medical City, during the period from November 2021 to March 2022. This study involved 88 women, age range (20-40 year). Fifty-one of them [Group I (GI)] had primary hypothyroidism who were diagnosed by an endocrinologist based on clinical analysis and thyroid function tests including serum TSH, T4 and T3. Thirty-seven of included women were apparently healthy and served as control group and referred to group II (GII). measurements of T3, T4, TSH by</p>			

AMH, inhibin B, FSH, and LH by using enzyme-linked immunosorbent assay

(ELISA) technique and anti-TPO by cobase e411. Body mass index (BMI) were

measured and calculated.

**Results:** The mean ( $\pm$ SD) value of serum AMH and inhibin B of hypothyroidism women was significantly lower than that of controls ( $p$

<

0.0001). However, the mean ( $\pm$ SD) value of AMH, inhibin B did not differ

significantly between women who had overt and subclinical hypothyroidism,

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well and poor controlled thyroid status, and who have had positive and negative

anti-TPO. But significant decrease in mean ( $\pm$ SD) value of inhibin B in irregular

menstruated patients when compared to regular ones ( $p < 0.038$ ). The mean

( $\pm$ SD) value of serum AMH of hypothyroidism women did not differ significantly between regular and irregular menstrual cycle.

The mean ( $\pm$ SD) value of serum LH of hypothyroidism women was significantly higher than that control group ( $p < 0.004$ ), while that of FSH did

not differ significantly. Serum TSH levels was significantly positively correlated with LH levels ( $r = 0.3$ ,  $p = 0.03$ ). In addition, BMI values was significantly positively correlated with FSH levels ( $r = 0.3$ ,  $p = 0.04$ ). But negative

correlation between BMI and inhibin B ( $r = -0.34$ ,  $p = 0.02$ ).

**Conclusions:** This study suggested the needed for serum measurement of

AMH, inhibin B in women suffered from hypothyroidi

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Thesis Title	Evaluation of Serum Preptin Levels in Patients with Pre Diabetes Mellitus and Newly Diagnostic Correlated with Adepokine NOV/CCN3, and Insulin Resistance Levels			
Year	2022		CD: 1533	
Abstract	<p><b>Background</b> Diabetic mellitus (DM) is a complex chronic disease characterized by cellular insulin resistance and chronic inflammation, Pre-diabetes is an intermediate state of hyperglycemia with glycemic parameters above normal but below the diabetes threshold globally. Nephroplastoma over expression adipokine (NOV\CCN3) is a multidomain-secreted protein, may responsible for initiation of diabetes through induction of obesity ,insulin resistance and impairment of pancreatic beta cell function. Preptin is peptide hormone co-secreted with insulin and plays an important role in the pathogenesis of diabetes. Glucose Transporter-4(GLUT4) found as a best predictor of diagnosis of diabetic state in comparisons with all markers in diabetes mellitus.</p> <p><b>Objective</b> To study the relationship between serum preptin, adipokine NOV/CCN3, GLUT4 and some biochemical parameters in pre-diabetes and newly diagnosed type 2 diabetes mellitus subjects as compared with healthy control groups</p> <p><b>Methods</b> This study was carried out at the department of Biochemistry/ College of Medicine/ University of Baghdad, and Al-Kadhimiya Teaching Hospital in Baghdad-Iraq, from April 2020 to October 2020. It included (180) Iraqi subjects with age ranged from (36-73) years, male (90) female (90) divided into three groups (healthy control group (60), 60 subjects having Pre diabetes mellitus type 2, and 60 patients having diabetes mellitus type 2 newly diagnosis). All samples have been tested for routine biochemical tests such as fasting blood glucose (FBS), glycated hemoglobin (HbA1c), and lipid profile were measured</p>			

automatically. In addition the serum levels of insulin, preptin, GLUT4, and nephroblastoma over expression have been evaluated by using ELISA. Then insulin resistance values for each sample have been calculated.

#### **Results**

The results of the serum preptin showed a significant increased level in pre-diabetes than newly diagnosed DM ( $449.5 \pm 50.1$ ,  $283.9 \pm 29.2$  pg./ml,  $p \leq 0.004$ ) compared with control groups while, serum nephroblastoma over expression (NOV/CCN3) levels were significantly higher in newly-diagnosed followed by the pre-diabetic ( $3.8 \pm 0.1$ ,  $2.3 \pm 0.1$ ,  $2.0 \pm 0.4$  pg./ml,  $p \leq 0.04$ ,  $0.02$ ) respectively compare with control groups.

Serum glucose transporter -4 (GLUT4) showed significant increased level in newly-diagnosed followed by pre-diabetic compared with the control groups ( $10.7 \pm 0.29$ ,  $5.4 \pm 0.06$ ,  $2.0 \pm 0.1$  pg. /ml,  $p \leq 0.04$ ,  $0.01$ ),

Serum HbA1c showed significant increased level in newly-diagnosed followed by pre-diabetic compared with the control groups ( $7.8 \pm 0.2$ ,  $5.8 \pm 0.1$ ,  $5.1 \pm 0.1\%$ ,  $p \leq 0.04$ ,  $0.01$ ). Serum insulin levels recorded a significant increased among all the studied groups, pre-diabetic subjects, followed by newly-diagnosed as compared to the control groups ( $29.1 \pm 3.5$ ,  $20.7 \pm 2.4$ ,  $14.3 \pm 2.0$   $\mu$ IU/ml,  $p \leq 0.04$ ,  $0.05$ ).

The preptin level in control group showed significant negative correlation with age ( $r = -0.29$ ,  $p \leq 0.03$ ) and significant positive correlation between preptin and HOMA-IR in pre-diabetics ( $r = 0.28$ ,  $p \leq 0.04$ ), in addition to significant positive correlation between preptin to FBS, HbA1C, HOMA-IR and significant negative with the GLUT4 in newly diagnosed T2DM ( $r = 0.35$ ,  $0.28$ ,  $0.38$ ,  $-0.31$ ,  $p \leq 0.008$ ,  $0.04$ ,  $0.004$ ,  $0.02$ ) respectively, while the NOV/CCN3 correlate significant negatively with age in control group ( $r = -0.22$ ,  $p \leq 0.03$ ) and correlate positively significant with the BMI in pre-diabetic and with VLDL in newly diagnosed ( $r = 0.31$ ,  $0.27$ ,  $p \leq 0.02$ ,  $0.04$ ) respectively, and the results showed that the GLUT4 correlate positively significant with age in the newly-diagnosed subjects ( $r = 0.42$ ,  $p \leq 0.001$ ).

With (Sugar, HbA1c) the correlation was significant only in the newly-diagnosed subjects ( $r = 0.38$ ,  $0.42$ ,  $p \leq 0.004$ ,  $0.001$ ) respectively, while GLUT4 correlate negatively significant with (insulin, preptin) within the newly-diagnosed subjects ( $r = -0.31$ ,  $-0.31$ ,  $p \leq 0.02$ ) respectively. The odd ratios for subjects of pre diabetes and newly-diagnosed of preptin (odd=1.9, 1.8,  $p \leq 0.001$ ,  $0.002$ ). The ROC characteristics of preptin in pre-diabetes (AUC= 0.73,  $p \leq 0.001$ ), cutoff >181.5, sensitivity= 63.33%, specificity =100%),

#### **III**

while the ROC of newly diagnosed (AUC= 0.54,  $p > 0.41$ , cutoff >188.7, sensitivity=13.33%, specificity=97.5%).

The odd ratios for subjects of pre diabetes and newly-diagnosed of NOV/CCN3 (odd=0.8, 1.2,  $p \leq 0.04$ ,  $0.003$ ) respectively, and the receiver operator curve ROC characteristics of NOV/CCN3 in pre-diabetes

(area under the curve(AUC)=0.89,  $P \leq 0.001$ ), cutoff >0.5, sensitivity=86.67%, specificity=91.67%), while the ROC of newly diagnosed (AUC=0.65,  $p \leq 0.001$ , cutoff>0.7, sensitivity=90%, specificity =41.67%). The odd ratios for subjects of pre diabetes and newly-diagnosed for GLUT4 (odd = 2.5, 1.9,  $p \leq 0.03$ ) respectively, ROC characteristics of GLUT4 in pre-diabetes (AUC=0.51,  $p > 0.83$ ), cutoff >2.4, sensitivity=15%, specificity=100%), while the ROC of newly diagnosed (AUC=0.94,  $p > 0.001$ , cutoff>2.4, sensitivity =100%, specificity =92.5%).

#### **Conclusion**

This study concluded that preptin , GLUT4 and NOV/CCN3 were highly specific to predict for diagnosis in pre diabetes mellitus disease , but highly sensitive for HOMA-IR and insulin. In newly diagnosed patients of type 2diabetese mellitus, the highly sensitivity parameters were GLUT4&NOV/CCN3, but specific parameters were preptin and GLUT4, hence GLUT4 is the best predictor of the diagnosis of newly diagnosed T2DM. All parameters (sugar, HbA1c, insulin, HOMA-IR, preptin, cholesterol, triglyceride(TG), LDL-c, HDL-c, VLDL-c and GLUT4 as risk factor for pre diabetic subjects , but low risk in NOV/CCN3.

All parameters(sugar, HbA1c, insulin, HOMA-IR, preptin, cholesterol, triglyceride(TG), LDL-c, , VLDL-c and GLUT4 as risk factor for patients with newly diagnosed type 2 diabetes mellitus , but low risk factor in HDL-c. preptin ,significant positive correlated with HOMA-IR in pre diabetic subjects and newly diagnosed type 2 diabetes mellitus improved that preptin directly related to glucose mediated insulin secretion. GLUT4 significantly correlated with sugar, HbA1c, insulin and preptin that improve preptin induce secretion GLUT4when increase glucose concentration the induce secretion of insulin from  $\beta$  cell of pancreas.



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Thesis Title	The Role of Serum Levels of C-terminal telopeptide Type-I Collagen and Procollagen Type-I NterminalPropeptide in Prediction of Early Osteoporosis in men Patients with type-2 Diabetes Mellitus.			
Year	2022		CD: 1228	
Abstract	<p><b>Background:</b> Diabetes is a metabolic illness with numerous etiologies characterized by persistent hyperglycemia caused by abnormalities in insulin synthesis, insulin action, or both. Diabetes has been identified as a significant osteoporosis risk factor due to its multiple effects on the skeletal system and bone metabolism. Osteoporosis is a progressive skeletal condition that primarily affects postmenopausal women. Obesity is known as a common osteoporosis risk factor.</p> <p>Bones tissue is a living, porous, anisotropic material that undergoes constant modification via a process known as bone remodeling. The Procollagen Type I Nterminal Propeptide and C-terminal telopeptide Type-I Collagen are produced during bone remodeling and serve as bone turnover markers. Early identification of bone mass loss in Type -2 diabetic patients may help reduce bone loss and future fracture risk.</p> <p><b>Objectives:</b> The study aims to develop a practical model for screening of bone turnover state in patients with diabetes (type2) and evaluate its clinical usefulness in identifying diabetic osteopathy. The secondary aim is to investigate</p>			

whether obesity in people with type 2 DM affects fracture risk, BMD, and bone quality parameters.

**Subject, Material, and. Methods:** In this case-control study, one hundred twenty men aged from forty to sixty-nine were divided into main categories.: type 2DM (n=80) and healthy control (n=40), Serum samples were analyzed for fasting blood glucose, calcium, alkaline phosphatase Albumin and whole blood to assess HbA1C by using automation (cobs 111). Procollagen Type I N-terminal Propeptide and C-terminal telopeptide Type-I Collagen levels in serum were determined using ELISA kits, and PTH using (Cobas e 411). Participants had their BMD measured at the lumbar spine using (DEXA).

**Results:** In the Type 2DM group, the mean ( $\pm$ SD) values of serum Procollagen Type -I N-terminal Propeptide and C-terminal telopeptide Type-I Collagen levels were significantly lower than the healthy group ( $p < 0.000$ ,  $p < 0.000$ , respectively).

In two groups, serum Procollagen Type- I N-terminal Propeptide and CTX-1 levels had almost no significant correlation with age, FBS, or HbA1C. In both groups, there was a significant positive correlation between C-terminal telopeptide Type-I Collagen and Procollagen Type I N-terminal Propeptide, with  $p < 0.000$  and  $P < 0.000$ , respectively. They had no significant difference in Spine BMD; T-score had a p-value of 0.27, 0.37 and no correlation between these marker (P1NP, CTX-1) with body mass index  $p < 0.43$  and  $P < 0.07$  respectively .

**The Conclusion:** Men with T2DM had a lower bone turnover and worse bone quality than those in control. Bone turnover marker best adopt bone turnover criteria as a proactive examination to diagnose the internal structure of bone quality and early detection of bone mass loss before osteoporosis occurs. Fractures may be predicted by bone turnover marker independently of bone mineral density.

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Thesis Title	The Impact of Ghrelin, Insulin like growth factor-1 (IGF-1), Leptin and Insulin on the growth of Obese Children			
Year	2022		CD: 1534	
Abstract	<p>Ghrelin, identified as an endogenous protein for the growth hormone secretagogue receptor, functions as a somatotrophic and orexigenic signal from the stomach. Ghrelin has a unique post-translational modification: the hydroxyl group of the third amino acid, usually a serine but in some species a threonine, is esterified by octanoic acid and is essential for ghrelin's biological activities.</p> <p>The secretion of ghrelin increases under conditions of negative energy balance, such as starvation, cachexia, and anorexia nervosa, whereas its secretion decreases under conditions of positive energy-balance such as feeding, hyperglycemia, and obesity. In addition to having a powerful effect on the secretion of growth hormone, ghrelin stimulates food intake and transduces signals to hypothalamic regulatory nuclei that control energy homeostasis. Thus, it is interesting to note that the stomach may play an important role not only in digestion but also pituitary growth hormone release and central feeding regulation.</p> <p>The discovered hormone, ghrelin, may well be the bridge connecting somatic growth with general metabolism.</p> <p>The aim of this study was to test whether Ghrelin could play a part in predisposing to early onset of obesity or be associated with anthropometric data and secretion of leptin, insulin or IGF1 in overweight and obese children, and to compare with control children with normal weight.</p> <p>Design and methods: ELISA method was used to assay Ghrelin, Leptin, IGF1 and Insulin. Blood was taken with drawn sample from 40 obese children, 11 overweight children and 29 normal weight healthy children their age (5-11) years.</p> <p>Results: The mean of Ghrelin concentration was significantly lower in obese and overweight children than in controls (<math>P &lt; 0.000</math>). The mean of IGF1 concentration was significantly higher in obese and overweight children than in controls (<math>P &lt; 0.000</math>). The mean of insulin concentration was significantly higher in obese and overweight children</p>			

	<p>than in controls ( <math>P &lt; 0.007</math> ). The mean of Leptin concentration was significantly higher in obese and overweight children than in controls ( <math>P &lt; 0.000</math> ). Negative correlation between Ghrelin and BMI , Leptin , Insulin in pre pubertal children while positive correlation between Ghrelin and IGF1 in obese children .</p>
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	<p><b>Conclusion :</b> The changes in Ghrelin over childhood do not suggest that it is a direct growth-promoting hormone, but its secondary effects on the IGF axis could contribute to growth acceleration over puberty.</p>
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Thesis Title	Relationship Between Serum Glutathione and Visual Evoked Potentials in Patients with Multiple Sclerosis			
Year	2022		CD: 1535	
Abstract	<p>Multiple sclerosis is one of the disabling diseases of young adults involving the central nervous system (CNS), i.e., the brain and the spinal cord , its prevalence in Iraq is 11.73/100,000, it implicit a high burden associated with reduced quality of life and a socioeconomic impact not only on the involved individual or family but on the whole health system. Expanded Disability Status Scale can monitor multiple sclerosis disability and disease activity while Visually Evoked Potentials serves as a marker of myelination. Glutathione is a thiol-containing molecule, as it functions as a main antioxidant. The study aimed to determine the association between glutathione level and visual evoked potentials in relation to Expanded Disability Status Scale in multiple sclerosis patients. To assess visual evoked potentials in patients with multiple sclerosis. To measure Glutathione level as an antioxidant marker in patients with multiple sclerosis. To study the expanded disability status scale in patients with multiple sclerosis.</p> <p>This was a case control study that was conducted in Ghazi Al Hariri Hospital from the first of November 2021 to the end of January 2022. Fifty patients diagnosed with multiple sclerosis were enrolled in the study and compared to 50 apparently healthy controls. For both groups Expanded Disability Status Scale scores were calculated, visual evoked potentials were estimated and glutathione level were measured using ELISA. All data were refined. Independent t test was used to explore the difference</p>			

between the two groups. Pearson Correlation was calculated to investigate the type of the relationship between variables. In all statistical analysis a p value  $\leq 0.05$  is considered significant. The mean age of multiple sclerosis cases was  $33.52 \pm 8.01$  years. The mean disease duration was  $4.06 \pm 3.05$  years. Mean Expanded Disability Status Scale for patients was  $2.84 \pm 2.86$ . The study showed a significant difference between multiple sclerosis cases and controls. In such a way that MS cases had longer latency periods of VEP, lower amplitude, high Inter Ocular differences, and lower glutathione levels. The study showed a significant positive correlation between Expanded Disability Status Scale and P100 latency period ( $r=0.455$ ; p value= 0.001 for right eye latency period and  $r=0.433$ ; p value = 0.002 for left eye latency period). There is a negative correlation between the latency period and glutathione levels. Pearson correlation coefficient (r) was -0.418 (p-value = 0.002) for the left eye and  $r= -0.353$  (p-value < 0.012) for the right eye. Another significant negative correlation was reported between disease duration and glutathione levels ( $r = -0.339$ ; pvalue=0.016). In Conclusion: The study showed a significant positive correlation between disease duration, Visually Evoked Potentials prolonged latencies and Expanded Disability Status Scale score which indicates the increase the severity of the disease with time. Visual evoked potential parameter was significantly different between multiple sclerosis patients and control groups. Glutathione levels were significantly higher in control compared to the multiple sclerosis groups and correlated negatively and significantly with Expanded Disability Status Scale score and Visually Evoked Potentials latency confirming the increase in the oxidative stress with the increase severity.

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Thesis Title	Association of Anti Collagen Type II Antibodies, Zinc, and Selenium with Rheumatoid Arthritis			
Year	2022		CD: 1537	
Abstract	<p>Rheumatoid arthritis chronic autoimmune condition characterized by inflammation that contributes to the deterioration of joints, bones, tendons, and ligaments. Anticollagen type II antibodies are a systemic inflammatory marker that can be used to predict events such as rheumatoid arthritis. Toxic and trace elements are among the several contributing factors proposed to participate in the pathogenesis of this disease.</p> <p><b>Objective:</b> To evaluate the role of Anticollagen type II antibodies in rheumatoid arthritis patients and correlate that with disease activity score (DAS-28). In addition to studying the correlation of Anticollagen type II antibodies with zinc, selenium, C-Reactive Protein (CRP), and erythrocyte sedimentation rate (ESR), and determine any possible association between these parameters, and between these parameters and the degree of disease activity (DAS-28).</p> <p><b>Subject and Method:</b> This study was conducted at Baghdad Teaching Hospital and Ghazi Al-Hariri Hospital in the Medical City of Baghdad, Iraq, from November 2021 to March 2022. It included 100 Iraqi patients with rheumatoid arthritis, their age range from (20–71) years (74 female and 26 male) and 30 healthy subjects as a control (22 female, 8 male). Five milliliters of blood were aspirated from each control and patient subject, divided into two parts. The first one (3 ml)</p>			

was transferred into a plain tube, the serum was then isolated by centrifugation for

**Abstracts**

**IV**

10 minutes used for measurements of the Anticollagen type II antibodies, zinc, selenium, and C-Reactive Protein(CRP). While the second part (2ml) was transferred to the tube-containing EDTA to be used for hematological measurement of the erythrocyte sedimentation rate (ESR). The Enzyme-Linked Immunosorbent Assay (ELISA), Flame Atomic Absorption Spectrophotometry (FAAS), and Grafite Furnace Atomic Absorption Spectrophotometry (GFAAS) were used to determine these parameters.

**Results:**

This study found that the levels of Anticollagen type II antibodies in patients with rheumatoid arthritis were significantly higher than in healthy controls.

While zinc and selenium levels were significantly lower in patients with rheumatoid arthritis ( $P > 0.05$ ). Anti CII had a statistically significant positive moderate correlation with ESR and CRP,  $r$  was 0.56 0.46,  $p$ -value 0.000 and 0.000, respectively, and a statistically significant positive strong correlation with DAS 28,  $r$  0.65 and  $p$ -value 0.000.

**Conclusions:**

Anticollagen type II antibodies can be considered an important parameter for the early detection of rheumatoid arthritis and can also be used to determine the activity of rheumatoid arthritis. Low levels of Zinc and selenium may play a role in the incidence of rheumatoid arthritis and It may play a significant role in the development of rheumatoid arthritis itself.



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Thesis Title	Hypothyroidism Association with the Level of Inositol 1,4,5 Triphosphate (IP3)			
Year	2022		CD: 1560	
Abstract	<p>Hypothyroidism is a condition in which the thyroid gland does not produce enough thyroid hormone. Most people who suffer from hypothyroidism also suffer from ineffectiveness and weight gain. Their medication myo inositol with the synthesis of thyroid hormones can lead to its importance in treating the thyroid gland.</p> <p>The Aim of Study: Estimation of serum of inositol 1,4,5-triphosphate (IP3), and selenium in hypothyroidism disorder and through that level, can shed light on whether it is accused of inactivity of the thyroid gland and at the same time open the doors for the use as a treatment.</p> <p>Study design: Analytical cross-sectional study.</p> <p>Subjects: This study involved 120 subjects divided into three groups, the first group included 40 healthy subjects, the second group included 25 patients with subclinical hypothyroidism, and the third group had 55 patients with hypothyroidism. All subjects with age range (25-69 years). The study involves 72 females and 48 males. The work was carried out between December 2021 and January 2022, subjects were chosen from a teaching laboratory in the Medical City Hospital.</p>			

**Material and Methods:**

To achieve the purpose of the aim, thyroid hormones and serum thyroidstimulating hormone (TSH) were determined using an Enzyme Immunoassay, while serum inositol 1,4,5-triphosphate (IP3) and thyroid peroxidase antibodies

**IV**

(TPO Ab) were determined using an enzyme-linked immune sorbent assay

(ELISA) system. Selenium is determined by using Colorimetric Determination.

**Results:**

In this study, hypothyroidism patients showed a significant (p 0.00) decrease level of serum IP3 when compared with healthy subjects.

While the

hypothyroidism patients and healthy subjects showed a non-significant (p 0.10)

difference when compared with each other to the level of serum selenium. There

is significant positive correlation with serum inositol 1,4,5 triphosphate (IP3)

with each of S.T3 (with  $r = 0.58$ , p 0.00), S.T4 (with  $r = 0.59$ , p 0.00), and

significant negative correlation S.TSH (with  $r = -0.82$ , p 0.00), in hypothyroidism

Patients. serum IP3 was determined Cut-off value of 5.25 (ng/ml), while serum

selenium was determined Cut-off value of 27.35 (ng/ml).

**Conclusion:**

Inositol 1,4,5 triphosphate (IP3) deficiency in hypothyroidism disorder may be a cause of it happening, at the same time may be useful in its treatment

even if it was not studied adequately in the study, but through its effect on a

thyroid hormone. A decrease in the level of serum Selenium in Subclinical

hypothyroidism may be one of the reasons for the occurrence of hypothyroidism

disorder.

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Thesis Title	Association of Glutathione Reductase, Selenium, Zinc and Vitamin C and Disease Activity of Rheumatoid Arthritis			
Year	2022		CD: 1542	
Abstract	<p>Rheumatoid arthritis (RA) is a multi-factorial chronic autoimmune disorders that influences a few organs and joints transcendently the synovial joints, Early diagnosis is important to ideal helpful achievement treatment, RA is a condition that is related with oxidative stress. Oxidative stress is defined the imbalance of oxidant/antioxidant forces in favor of the oxidant, during normal cellular metabolic processes free radicals and reactive metabolites are continuously generated. these oxidant products can injure and destroy the structures of cells or tissues.</p> <p><b>Objective:</b> The aim of this study is designed to measure the serum concentration of glutathione reductase enzyme in a patient with rheumatoid arthritis, and measurement of vitamin c and selenium, and investigation the relationship between these biochemical markers and disease activity.</p> <p><b>Subject and Method:</b> The study included (130) subjects, (100) patients with RA only, and (30) subjects with age, sex-matched healthy control. This study and sample collection were performed during the period from November 2021 to January 2022. These participants were selected from Medical City Baghdad Hospital / Rheumatology and Rehabilitation Consultation Unit attending the outpatient clinic. History was taken and Disease</p>			









activity had measured by Disease activity score 28 – ESR from each patient and (10 ml) of blood was withdrawn from each control and patient, used for measurements of the glutathione reductase, Selenium, Rheumatoid Factor, c-reactive protein, and vitamin C, and measurement of erythrocyte sedimentation rate (ESR).

**Result:**  
The result of this study found a significant increase in serum Glutathione reductase enzyme in Rheumatoid arthritis patients ( $10.622 \pm 5.213$  ng/ml) in comparison with healthy control subjects ( $6.522 \pm 1.867$  ng/ml,  $P < 0.05$ ), there was a significant positive correlation between the serum glutathione reductase and Disease activity score ( $r = 0.265$ ,  $P < 0.05$ ).

Significant decreased in serum vitamin C level in patient with RA than the control subjects ( $0.439 \pm 0.249$ ,  $1.331 \pm 0.489$  mg/dl) ( $P < 0.05$ ) respectively. the statistical result had obtained from the study shows there are low serum selenium levels in patients with RA than in the healthy control subjects ( $69.23 \pm 1.78$ ,  $116.57 \pm 13.28$  µg/l) respectively with highly statistically significant ( $P < 0.05$ ). The study of correlation between DAS28-ESR and vitamin C and selenium had been showing negative correlation with ( $r = -0.684$ ,  $r = -0.846$ ) respectively ( $P < 0.05$ ). significant decrease in serum Zinc levels in patients with RA than the healthy control subjects ( $59.34 \pm 12.77$ ,  $100.41 \pm 21.05$  µg/dl) respectively ( $P < 0.05$ ).

**Conclusion:**  
Glutathione Reductase enzyme increase due to Oxidative stress during chronic inflammation in Patients with RA. while Vitamin C can be considered as an approved parameter for oxidative stress will consume by the Non-Enzymatic anti-Oxidant effect due to inflammation response, and the evaluation of selenium level to show the activity of the glutathione peroxidase enzyme that shows a significant decrease, which will be considered low enzyme activity.

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<b>Thesis Title</b>	Evaluation of serum N-myc downstream regulated gene1 as novel biomarker of bladder cancer in Iraqi patients			
<b>Year</b>	<b>2022</b>		<b>CD: 1549</b>	
<b>Abstract</b>	<p><b>Background:</b> Bladder cancer is among the most prevalent cancers worldwide, with 549,393 new cases reported in 2018. Approximately 3.0% of all new cancer diagnoses and 2.1% of all cancer deaths are due to urinary bladder cancer.</p> <p><b>Objectives:</b> the aim of this study was to evaluate the efficiency of the N-myc downstream-regulated gene 1 (NDRG1) as a tumor biomarker and albumin to globulin ratio (AGR) as a systemic inflammatory marker in the screening of bladder cancer patients in the Iraqi population in addition to kidney function tests to check the efficiency of renal system functions in those patients.</p> <p><b>Subjects, materials, and methods:</b> A total of 100 individuals in this case-control study were enrolled and divided into two groups. The first</p>			

	<p>group included 50 patients who were first diagnosed with a bladder mass and investigated by undergoing cystoscopy examination for transurethral resection of bladder tumor (TURB). The second group included 50 healthy individuals who have normal bladder tissue.</p> <p><b>Results:</b> The results of the present study showed the highest level of NDRG1 among cases with statically significant association (<math>p=0.001</math>) with a sensitivity of 96% and a specificity of 92%. (AGR) was more among the controls group than in the cases group with statically significant (<math>p=0.001</math>).</p> <p>There was a statically significant association between the cases group and the controls group in (b.urea, s.uric acid, s.ca, and s.sodium ).</p> <p><b>Conclusions:</b> Serum NDRG1 protein levels were found in the patients group with bladder cancer significantly higher than in the healthy individuals group. There was a negative association between (AGR) and (NDRG1) concentrations in patients with bladder cancer.</p> <p><b>Recommendations:</b> we recommended doing more extensive studies that focus on (NDRG1) and (AGR) as new biomarkers for bladder cancer.</p>
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Thesis Title	The Role of Vitamin D3 in Oligospermia in Iraqi Patients			
Year	2022		CD: 1550	
Abstract	<p>Infertility is a disease of the male or female reproductive system described as the failure to achieve a pregnancy after 12 months or more of regular unprotected sexual intercourse. Between 48 million couples and 186 million individuals live with infertility globally , with male infertility accounting for 40% of that number . Vitamin D may have a crucial role in male reproductive function, including semen quality and androgen status, according to a growing body of data from observational research. Vitamin D concentrations and sperm motility and vitamin D concentrations and normal sperm morphology in infertile men both show a favorable connection. Men with severe vitamin D deficiency [25(OH)D 10 ng/mL] had a lower proportion of motile spermatozoa (62 percent vs. 70 percent ; p = 0.027), progressive motile spermatozoa (56 percent vs. 64 percent ; p = 0.035), and morphologically normal spermatozoa (6 percent vs. 8 percent ; p = 0.044) and morphological.</p> <p>Aim of study</p> <p>Is to determination the level of vitamin D3, Follicle Stimulating hormone , Luteinizing hormone, Prolactin , Testosterone ,calcium and phosphorus in the blood in patients complaining of infertility, either due to decrease in sperm count or decrease in motility and viability of the sperm. The results compare with the same of normal fertile</p>			

subjects.

#### **Subject and methods**

This was case-control study and conducted in medical college /Baghdad University from the period of March 2021 to October 2022. Ethical considerations were

taken from all patients enrolling in this study at Kamal Al-Samurai Hospital Fertility

Center ,Infertility Treatment and In-vitro Fertilization( IVF)and Fatima AL-Zahraa

Hospital for Maternity and Children , Fertility and Sterility Center In Baghdad city. There

were 120 men, (90) of them were infertile, that took part in our study. The enzyme-linked

immunosorbent assay (Elisa), which measures vitamin D, was employed. The Seminal

fluid analysis aimed to the basic semen analysis is to evaluate descriptive parameters of

the ejaculates obtained mainly by masturbation in an appropriate chronological order to

#### **II**

maintain the efficiency and quality of the laboratory work . A normal semen sample

should have a volume of 1.5 ml or more , with an approximate  $15 \times 10^6$  spermatozoa per

ml lower reference limit for sperm concentration.

#### **Results**

The study showed Mean  $\pm$  SD of age ( $30.74 \pm 6.5$ ) and Mean  $\pm$  SD of BMI level was

significantly higher in patient group than that in controls (23.28, versus 22.43 kg/m<sup>2</sup>, P=

0.03), there was no significant difference between the two groups in age (P= 0.061) . The

seminal fluid analysis Means of volume, count, and normal morphology were highly

statistically significant lower (P < 0.05) in patient group than that in controls. Correlation

between vitamin D and sperm count (r= 0.621, P= 0.001) was significant moderate

positive, while significant strong negative correlation was found between vitamin D and

motility sperm (r= - 0.714, P= 0.001). No statistical significant correlations detected

between vitamin D and all of age, BMI, infertility duration, and volume of seminal fluid.

the means $\pm$  SD of FSH, LH, and testosterone levels were highly significantly lower



were ( $3.85 \pm 0.6$  ,  $2.34 \pm 0.8$  ,  $3.85 \pm 1.0$ ) ; while mean $\pm$  SD of prolactin was highly significant ( $19.56 \pm 3.6$ ) ( $P < 0.05$ ). the mean $\pm$  SD of vitamin D, and s. calcium were significantly lower ( $16.39 \pm 4.9$  ,  $8.02 \pm 1.2$ ) while mean of s. phosphorus was highly significantly ( $2.35 \pm 0.8$ ) ( $P < 0.05$ ) in case group than that in controls. Correlation between vitamin D and FSH ( $r = 0.518$ ,  $P = 0.001$ ), and LH ( $r = 0.581$ ,  $P = 0.001$ ) were significant moderate positive , while significant weak positive correlations were detected between vitamin D and all of testosterone ( $r = 0.308$ ,  $P = 0.003$ ), S. Ca ( $r = 0.23$ ,  $P = 0.029$ ), and S. Phosphors ( $r = 0.368$ ,  $P = 0.001$ ). Significant moderate negative correlation was seen between vitamin D and prolactin ( $r = - 0.533$ ,  $P = 0.001$ ).

**Conclusion**  
in this study ,we found the Mean  $\pm$  SD vitamin D level were significantly lower in patient compared with the control as well as Serum levels of FSH, LH and testosterone significantly lower in patient group while Serum prolactin is significantly higher in patient group. we also found Serum calcium was significantly lower; while of serum phosphorus was significantly higher in case group than that in controls.

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Thesis Title	Review of Upper Abdominal Cancers Treated by External Beam Radiotherapy Comparing 3DCRT By IMRT			
Year	2022		CD: 1551	
Abstract	<p>Upper abdominal malignancies represent some at the challenging cancers to treat. The role of multiple modality of treatment like surgery, chemo and RT was used to control these types of cancers (gastric, pancreatic and esophagus) with general approach for evaluation as clinical examination, imaging (CT, MRI, PETCT), needle biopsy. Early diagnosis and curative therapies are the goal to improve survival rates by using new techniques which reduce toxicity to normal organs and improve local control.</p> <p><b>Aim of study:</b> Determine the frequency of upper abdominal cancers. Assess the radiation doses measure to organ at risk. Compare the radiation dose to the tumor and organ at risk between different radiotherapy techniques (3DCRT-IMRT). and assess the severity of toxicity to normal organs</p> <p><b>Methods:</b> Retrospective study conducted in the Radiation Therapy Department at the Medical City Complex, Baghdad, Iraq, during a period of 6 months from 2019 to May 2022, it involved 30 patients diagnosed with upper abdominal malignancies and received RT with DVH coverage for PTV and critical normal tissues.</p> <p><b>Result:</b> In a study of total 30 patients who were diagnosed with upper</p>			

abdominal  
 cancers and treated by RT patients age>55 years(60%),with significant  
 difference between patients ages according to primary sites of cancer  
 like  
 gastric(30-67),pancreas(35-65),esophagus(50-81).Most of cases  
 presented with  
 advance stages( 60%-T3),(23%-T4) the remain was T1,T2.Regarding  
 RT  
 treatment 95% PTV coverage was 95% while the 90% PTV coverage  
 97% .The  
 dose to organ at risk with the comparision between 3DCRT and IMRT  
 the dose  
 received by left lung, liver, spinal cord, left kidney were changeable  
 significantly more for IMRT over 3DCRT the rest OAR not impacted  
 in both  
 modalities.Overall survival in this study was 15 months in 80% of cases.

**VIII**

1. Conclusion: To the best of our knowledge, this is the first time study  
 for  
 determine the overall survival rates of upper abdomen malignancies  
 treated  
 by radiotherapy in Iraq.
2. The frequency of upper abdominal cancer according to age(gastric  
 median  
 55),(pancreas median 51),(esophagus median 67).
3. The radiation dose to organ at risk different between types of  
 radiation used.
4. The new techniques (IMRT) more effective in saving normal tissues.
5. The 95%PTV coverage is significantly better than 90%PTV coverage  
 according bases of radiation.
6. Overall survival of individuals with esophageal cancer is better than  
 gastric  
 and pancreatic cancers (15.44 vs. 14.2 vs. 13.95) months, respectively.

**Keywords:**Intensity modulated radiation therapy,3DCRT,upper  
 abdominal  
 cancers,Organ at risk.

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Thesis Title	Assessment of Women Knowledge Toward Cesarean Section Complications in Baghdad Teaching Hospital 2022			
Year	2022		CD: 1552	
Abstract	<p><b>Background:</b> The increasing rate of births by caesarean sections has become an issue of concern in many countries. Knowledge of women regarding caesarean section is an important tool to assess their education regarding this issue, especially in terms of complications.</p> <p><b>Objectives:</b> To assess women knowledge toward complications of cesarean section in Baghdad Teaching hospital and to find out the relationship between level of knowledge and their demographic characteristics such as (age, education, and multipara-cesarean section).</p> <p><b>Subjects and method:</b> A cross sectional descriptive study with analytic elements was conducted in Baghdad Teaching Hospital / Medical City Complex from the period extended from the 2nd of January to the end of June 2022. A structured questionnaire was used and a convenient sample of 400 married women at reproductive age was collected, who visited gynecology and obstetrics consultation outpatient clinic and the gynecology and obstetrics ward for different reasons.</p> <p><b>Results:</b> The study sample were 400 women, the highest age group of the participants 67.5% (270) were &lt; 35 years. The overwhelming majority were with poor level of knowledge corresponding to 78% (312) of study participants. Most women 260 (56.0%) did not know about (weakness of bowel movement after delivery as a complication of C/S), also the majority did not know [placenta progressing and adhesion in the next pregnancy 252 (63.0%), and uterus explosion in the next deliveries 258 (64.0%)]. Most of women knew about [delayed breast feeding as a</p>			

	<p>complication of C/S 104 (26%), and cost of cesarean section 174 (43.5%)].</p> <p><b>Conclusions:</b> two third of the patients had low knowledge level regarding complications of cesarean section, specially complications like “weakness of bowel movement after delivery”, “Placenta progressing</p> <p><b>II</b></p> <p>and adhesion in the next pregnancy”, and “uterus explosion in the next deliveries” while "Delay breast feeding" was the most known complication for participants. knowledge was better in those who were older than 35 years, highly educated and had a job specially women with less than three parity.</p>
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Thesis Title	Perception of Primary Health Care Centers physician on counselling Patients with Chronic Diseases in Alkarkh district- Baghdad 2			
Year	2022		CD: 1553	
Abstract	<p><b>Background:</b> Chronic diseases were found to be a source of mortality and morbidity that have a significant burden on health care system. These chronic diseases are characterized by a slow progression and long duration. The Promoting health and well-being is the core competencies of primary care. Healthy lifestyle is the mainstay of preventive medicine that include healthy diet, physically active, never smoking, and body mass index (BMI) less than 25 kg/m2.</p> <p><b>Objectives:</b> To assess physician perception about lifestyle counseling and to assess any association between physician perception and their demographic characteristic.</p> <p><b>subjects and Methods:</b> A Cross-sectional study was done at primary health care centers in al-Karkh, Baghdad, from September 2021 to April 2022. Two hundred doctors working at primary health care centers were included. Half of data where interviewed and half of them are web-based questionnaire. Categorical and dichotomous variables were expressed as a frequency and percentage with using chi square and fissure test in statistic analysis, P value at level &lt;0.05 considered as statistically significant. Officials' approvement was obtained.</p> <p><b>Results:</b> There were 128 (64%) participants aged 35 years or more, 156 (78%) married participants. It is difficult to intervene with obese</p>			

among  
118 (59%) participants and with smoker among 156 (78%)  
participants.  
There were 146 (73%) participants able to identify unhealthy habits, 87 (43.5%) Removing negative triggers, and 120 (60%) Belief in change.  
Distribution of job items in changing lifestyle according to the age category, gender, education degree, and years of experiences working at the PHC shows no significant differences,  $P>0.05$ . Lifestyle change is a central part of treatment in adult obesity among 153 (76.5%), High blood pressure among 170 (85%), type 2 diabetes among 191 (95.5%), and smoking among 187 (93.5%).  
Conclusions: There were 96.5% of physicians trying to change lifestyle of patients, 91.5% encouraging healthy habit, 30% encouraging them to read food label, and 23.4% encouraging activity. There was insufficient knowledge about the risks of chronic diseases among patients, unwillingness to change lifestyle, and an assigning responsibility to selfcare among patients having those chronic diseases.

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Department	Clinical Biochemistry			
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	<input checked="" type="radio"/> Master	<input type="radio"/> PhD	<input type="radio"/> Diploma	<input type="radio"/> Board
Thesis Title	Role of Serum Hepcidin as a biochemical marker as iron status in Children with beta-thalassemia in Wasit Province in Iraq			
Year	2022		CD: 1554	
Abstract	<p><b>Background:</b> Thalassemia is an inherited disorder in which one or more globin chains are not synthesized properly, resulting in deficient hemoglobin (Hb) production and premature red blood cell destruction. <math>\beta</math>-thalassemia is a type of the most predominant form of thalassemia in which hemoglobin Bchain production is quantitatively reduced. <math>\beta</math>-thalassemia is distinguished by anemia and depending on the severity of the anemia. Hepcidin, a hormone produced in the liver, regulates iron haemostasis in the body based on hypoxia, anaemia, and iron stores and controls the serum concentration and tissue distribution of iron.</p> <p><b>Objective:</b> To evaluate the usefulness of Serum Hepcidin level as a biochemical marker of iron status in children with <math>\beta</math> thalassemia major, <math>\beta</math> thalassemia Intermedia and its relation with serum ferritin level.</p> <p><b>Patients ,Material and Methods:</b> A cross-section study</p>			



which involved 90 children included 50 thalassemia major (TM) and 40 thalassemia Intermedia (TI). children were collected from the Thalassemia Centre in Al-Kut Hospital for Gynaecology and Paediatrics were randomly selected for this study. This study was during the period of November 2020 to January 2021. All patients child in both gender from (5-17 years) meet the thalassemia criteria in Iraq The diagnosis of  $\beta$ -thalassemia was based on conventional clinical and hematological criteria. Thirty blood samples were taken from healthy children from different locations in Al-Kut city with gender and age matched with the patient for creating a standardized limitation for parameter (Hepcidin) for the study sample comparison. Measurement Hb by automated hematology analyzer, Ferritin measurements, TSB, ALT , AST by using Abbott Architect c4000 analyzer and cobas c 111 analyzer. and Hepcidin measured by using enzyme-linked immunosorbent assay (ELISA) .

## II

**Results:** A statistical significant association between need to use chelating agent and  $\beta$ -thalassemia major,  $p\text{-value} \leq 0.02$  and a statistical significant association between  $\beta$ -thalassemia major and increase frequency of blood transfusion,  $p\text{-value} < 0.001$ .  $\beta$ -thalassemia major patients had statistically significant higher mean  $\pm$  SD levels of Hb, serum ferritin and iron levels  $8.77 \pm 0.48$  g/dl,  $4016.54 \pm 2500.81$  ng/ml,  $168.20 \pm 28.91$  mcg/dl in compare to  $\beta$ -

thalassemia intermediate mean  $\pm$  SD levels  $8.23 \pm 0.62$  g/dl,  $1629.48 \pm 1235.33$  ng/ml,  $133.85 \pm 33.9$  mcg/dl,  $p < 0.001$ ,  $0.001$  and  $0.001$ .  $\beta$ -thalassemia major patients had a statistical higher mean hepcidin  $7.71 \pm 2.74$  ng/ml in compare to  $\beta$ -thalassemia Intermedia  $6.53 \pm 1.8$  ng/ml,  $p \leq 0.02$  serum hepcidin had no statistical significant correlation with ferritin in patients with  $\beta$ TM and in patients with  $\beta$ TI, serum hepcidin no statistical significant correlation with Hb in patients with  $\beta$ TM and in patients with  $\beta$ TI, serum hepcidin no statistical significant correlation with iron in patients with  $\beta$ TM and in patients with  $\beta$ TI , serum hepcidin no statistical significant correlation with age in patients with  $\beta$ TM and in patients with  $\beta$ TI . When evaluating the RCO of hepcidin in comparison to the control group, hepcidin had an AUC of 0.94 and a cut-off value of 5.65 Sensitivity was 86%. and 90% specificity In  $\beta$ -thalassemia major, while in  $\beta$ -thalassemia Intermedia, the AUC of 0.77, a cutoff value of 5.43, a sensitivity of 70%, and a specificity of 80%.

**Conclusions:** Serum hepcidin level served as a biochemical marker in evaluation of iron overload in thalassemia major at cut-off 5.65, and thalassemia intermediate at cut-off 5.43 as well as in differentiation between thalassemia intermediate and major at cut-off 6.3

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Thesis Title	Changes in serum irisin and visfatin in response to metformin treatment in Iraqi women patients with polycystic ovary syndrome			
Year	2022		CD: 1555	
Abstract	<p>Polycystic ovary syndrome (PCOS) is the most prevalent endocrine condition in women, characterized by hyperandrogenism, infrequent ovulation and multiple follicular cysts in hypertrophied sized ovaries. The syndrome may also be associated with infertility, metabolic syndrome (MS), hyperinsulinemia and insulin resistance (IR). Irisin (Ir) is a polypeptide hormone involved in browning white fat, energy expenditure, weight loss, and improved glucose tolerance. Visfatin an adipocytokines hormone, found to have biological actions similar to insulin itself.</p> <p>Metformin is a first-line treatment to reduce insulin resistance, hyperinsulinemia, and hyperandrogenism in PCOS women.</p> <p><b>Aim of the study:</b></p> <p>Assessment the effect of Metformin during the minimum treatment period of three months with a dose 500 mg twice daily on the level of serum irisin and visfatin in PCOS Iraqi women compared to non-metformin-treated PCOS patients and healthy controls.</p> <p><b>XIV</b></p> <p><b>Subjects, material and methods:</b></p> <p>A prospective and retrospective case-control study on seventy patients diagnosed by a gynecologist with the polycystic ovarian syndrome. The study was conducted at the Department of Biochemistry, College of the Medicine /University of Baghdad, infertility clinic of Infertility Diagnosis and Assisted Reproductive Technologies at Kamal Al-Samarraey Hospital Baghdad/ Iraq, and the infertility clinic of FA'TMAT AL-ZHRAA Hospital/ Baghdad/ Iraq, in the Period from October 2020 to March 2021. The age ranges from (18-to 40) years. Anthropometric parameters were measured for each female, and five ml of fasting blood samples were taken from each female in their follicular phase</p> <p>Enzyme-Linked Immunosorbent Assay (ELISA) technique is intended for use on Huma Reader HS to measure serum insulin, irisin and</p>			

visfatin levels.

Data of patients were analyzed using the available statistical package of SPSS-27. Descriptive statistics are tabulated as a mean, percentage and standard deviation. Paired student t-test and ANOVA for variables levels were done. A significance level of  $\leq 0.05$  was considered a significant difference in correlation.

**XV**

**Results:**

The result shows significantly ( $p \leq 0.005$ ) higher levels of insulin and HOMA-IR in both PCOS groups than in healthy women and no significant differences between the two groups of PCOS.

No significant differences ( $p \geq 0.005$ ) in serum fasting blood glucose, s. LH and FSH.









There are no significant differences ( $p \geq 0.005$ ) in the duration of the disease, menstrual cycle regularity, and signs of hirsutism.

A significant difference ( $p \leq 0.005$ ) was observed in serum irisin and visfatin between the studied women and healthy controls. In contrast, no significant difference was found between PCOS women with and without metformin.

**Conclusion:**

In conclusion, there is no effect of metformin on serum irisin and visfatin levels, with duration of treatment at least for three months at dose of 500 mg twice daily .although it is shown it can be used s.irisin and visfatin as a diagnostic marker for PCOS.

## *University of Baghdad*

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<b>Thesis Title</b>	<b>Electrophysiological Analysis of Tremor Using Accelerometer and Surface Electromyography</b>			
<b>Year</b>	<b>2022</b>		<b>CD: 1556</b>	
<b>Abstract</b>	<p>A tremor is an involuntary rhythmic and oscillatory movement caused by the contraction of reciprocally innervated muscles in an alternating or irregularly synchronized fashion. The common types of tremor mainly include essential tremor and Parkinson's disease tremor. The diagnosis of Parkinson's disease and its differentiation from other tremors, such as essential tremors, is frequently tricky. Especially in early disease stages, it remains problematic. The accurate evaluation of tremors from diagnosis to patients' initial treatment and follow-up constitutes a crucial step for both patients and clinicians because assessment of prognosis and therapy selection depend on tremor type. And it is critical to the success of therapeutic trials.</p> <p>The aim of the study is to assess tremors using an accelerometer and surface</p>			

electromyography (EMG) to determine the frequency and amplitude of tremors and classify antagonist muscle interactions, to assess the ability of tremor analysis to discriminate whether tremor is caused by a mechanical component, mechanical reflex component, or central oscillators. and, to assist the utility of tremor analysis in clinical differential diagnosis by distinguishing physiological from pathological tremors and between pathological tremors such as Parkinson's disease and essential tremors.

This study is a cross-sectional study conducted at the neurophysiology unit at Al-Shaheed Ghazi Al-Hariri Hospital in Baghdad in the period from the first of

November/2021 to the twenty-eighth of February/2022. which included a total of

(59) patients with tremors who attended the neurophysiology unit after a referral

from the Movement Disorders Department in Baghdad Teaching Hospital. Surface

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electromyography and accelerometer signals were recorded from the affected limb

in several conditions for 60 sec.

The results were categorized and diagnosed based on electrophysiological criteria into an essential tremor (40.7%), followed by Parkinson's disease (32.2%),

enhanced physiological (11.9%), Physiological tremor (8.5%), and others (6.8%).

The electrophysiological and clinical diagnosis by neurologists matched in 93.3%

of patients. The tremor frequency of essential tremor was about (4.2-10.1) Hz compared to Parkinson's disease, which was about (4.1-7.5) Hz, while the

frequency of enhanced physiological and physiological tremor was up to (6.1–12.7) Hz and (5.1-10.2) Hz respectively. The frequency of enhanced physiological

and physiological tremors was significantly reduced by the weight load effect

Compared to Parkinson's disease and essential tremor. The tremor frequency of

Parkinson's disease and essential tremors was significantly different from that of

enhanced physiological and physiological tremor for several conditions, including

rest, posture, and weight-bearing 1 Kg ( $P \leq 0.05$ ). The main tremor muscle contraction pattern was synchronized for essential, enhanced physiological, and physiological tremors, and an alternating pattern for Parkinson's disease with significant relation among the groups ( $p \leq 0.05$ ). The presence of a time latency in postural tremor was observed in (84.2%) of the Parkinson's disease patients in this study, but in none with essential, enhanced physiological and physiological tremors. With significant relation among the groups ( $p \leq 0.05$ ). The mental concentration effects increase tremor amplitude in (94.7%) of Parkinson's disease, while all essential, enhanced physiological, and physiological tremors showed no change in amplitude. With significant relation among the groups ( $p \leq 0.05$ ).

Pearson's correlation was used to explore the correlation between patient age and tremor frequency in essential tremor and Parkinson's disease, there was no significant correlation between patient age and tremor frequency in which ( $R = -0.135$ ) ( $p \text{ value} = 0.529$ ) and ( $R = -0.210$ ) ( $p \text{ value} = 0.389$ ), respectively.

**In conclusion:** Tremor frequency is stable (does not decrease in frequency after loads) in patients with a central oscillator, such as PD and ET, but unstable (decreases in frequency after loads) with a mechanical reflex oscillator as EPT or a mechanical oscillator as PT. Tremor analysis can effectively differentiate between pathological tremors (Parkinson's disease versus essential tremors) by antagonistic muscle interaction, the latency and concentration effect, and physiological from pathological tremors by the weight load effect. The electrophysiological and the clinical diagnosis by neurologists matched in 93.3% of patients with essential, parkinsonian, enhanced physiological, and physiological tremors. Tremor analysis based on accelerometer and surface electromyography (EMG) electrodes is a readily available, noninvasive, and cost-efficient diagnostic tool.

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Thesis Title	BACTERIOLOGICAL AND IMMUNOLOGICAL STUDY OF HELICOBACTER PYLORI IN IRAQ PATIENTS WITH GASTRIC DYSPEPSIA			
Year	2022		CD: 1558	
Abstract	<p><i>Helicobacter pylori</i> infections are major causes of gastric dyspepsia which infects more than half the population of the world. The study aims to isolate and identify <i>H. pylori</i> from patient with gastric dyspepsia using various procedures, rapid urease test, biochemical tests, culture and determine antibiotic susceptibility profile test for <i>H.pylori</i> with detection of serum levels anti-<i>H. pylori</i> IgG antibody by flow chromatographic test and measuring serum levels of anti- <i>H. pylori</i> IgA antibody &amp; Human IL-6 in by ELISA in patients with Gastric dyspepsia Study group consist of a total (190) patient with gastric dyspepsia with different age groups )20-60) year from both genders.. They underwent diagnostic upper gastrointestinal (G.I.) endoscope at Endoscopy unit of AL- Sadder Teaching Hospital in Baghdad during the period the November 2021 to March 2022. Two type of sample (100serum ) and (90 biopsy) the volume of serum collection is 3 ml while the biopsy size is 2mm.</p> <p>The results shown significant correlation between <i>H. pylori</i> infection occurrence and endoscopically diagnosed Gastric dyspepsia symptoms 90 cases. It was recorded <i>H. pylori</i> 30 isolate from biopsy in Gastric dyspepsia patients by culture technique in modified Colombia urea agar. Diagnosed Gastric dyspepsia symptoms 100 cases from serum by flow chromatographic test for anti-<i>H. pylori</i> IgG antibody.it was recorded positive for anti-<i>H. pylori</i> IgG antibody 70 cases from patients. Antibiotic sensitivity test results showed that the <i>H. pylori</i> isolates were susceptible to levofloxacin (80%), ciprofloxacin (70%). Yet, all the tested isolates were found, resistant to metronidazole (100%) and tetracycline (80%). II</p>			



	<p>The results showed high significant correlation between <i>H. pylori</i> infection and high serum level of Human IL6 . Also show significant correlation between high serum level of anti-<i>H. pylori</i> IgA antibody in patients with Gastric dyspepsia. At the least show high significant correlation between O blood group and <i>H.pylori</i> infection.</p> <p>In conclusion : high serum level of anti-<i>H. pylori</i> IgA antibody , Human IL6 in patients with Gastric dyspepsia, High rate infection of <i>H. pylori</i> with O blood group in patients with Gastric dyspepsia. <i>H. pylori</i> isolates were susceptible to levofloxacin 80%.</p>
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Career	Assistant Lecturer	Lecturer	Assistant Professor	Professor
	Master	PhD	Diploma	Board
Thesis Title	Maternal and Neonatal Outcomes in Pregnant Woman with COVID-19 in Al-Yarmouk Teaching Hospital in Baghdad 2021			
Year	2022		CD: 1559	
Abstract	<p><b>Background:</b> Physiological, mechanical, and immunologic alterations in pregnancy could potentially affect the susceptibility to and the severity of COVID-19 during pregnancy.</p> <p><b>Aims of the study:</b> To evaluate the association between COVID-19 infection during pregnancy and adverse pregnancy outcomes. And to identify factors associated with poor outcomes</p> <p><b>Patients and Method:</b> A comparative cross-sectional study was conducted in AL-Yarmouk Teaching Hospital, Baghdad/ Iraq from January-July 2022. The data was extracted and collected from the patient's hospital records of the admitted patients for the period from the 1.st of January to the 31.th of December 2021. A sample from the records of pregnant women were included in the study and classified into two groups: <b>First group:</b> Pregnant patients who were diagnosed as COVID-19 infection with positive PCR, <b>Second group:</b> Pregnant patients with negative PCR for COVID-19 infection.</p> <p><b>Results:</b> In the current study the number of included patients were 100 pregnant women confirmed by PCR to be infected with COVID-19 and 100 pregnant women confirmed by PCR to be free of COVID-19. The highest proportion of study sample pregnant gave birth to term pregnancy 77.0% (154). Newborns admitted to Neonatal Care Unit were 50 (25%). Mild COVID-19 contributed to 72 (72%) and moderate COVID-19 was in 28 (28%), with no severe or critical cases. Newborn mortality rate was 8%. None of the cases were reported the COVID-19 status among newborns. The 4 died mothers were all with positive COVID-19 PCR, also from the total 16</p>			

**newborn mortality, a 13 died newborn were from mothers with positive COVID-19 PCR (P = 0.009). Among the 50 admitted newborns to Neonatal II**

**Care Unit, 43 were born to a mother with positive COVID-19 (P <0.001).**

**The highest proportion of cesarean section 59.4% (76) among positive COVID-19 group (P <0.001) with a risk estimate of 2.923 (95% C.I. 1.598 – 5.346).**

**Conclusion: The neonatal mortality was significantly higher among mothers with COVID-19. Cesarean Section and admission to the Neonatal Care Unit were significantly higher among mothers with COVID-19. Our study found no significant association between maternal outcome and COVID-19 status.**

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Department	Science in Pharmacology.			
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Career	<input type="checkbox"/> Assistant Lecturer	<input type="checkbox"/> Lecturer	<input type="checkbox"/> Assistant Professor	<input type="checkbox"/> Professor
	<input checked="" type="checkbox"/> Master	<input type="checkbox"/> PhD	<input type="checkbox"/> Diploma	<input type="checkbox"/> Board
Thesis Title	EFFECT OF LENALIDOMIDE AS TOPICAL OINTMENT COMPARED WITH CLOBETASOL OINTMENT ON IMIQUIMOD-INDUCED PSORIASIS IN MICE MODEL			
Year	2022		CD: 1524	
Abstract	<p>Background: Psoriasis is an inflammatory skin disorder with no established cause. According to emerging data, psoriasis is an immune-mediated disease. A defect in keratinocyte differentiation and proliferation, as well as inflammatory cell infiltration, especially macrophages, T lymphocytes, and neutrophils, are thought to be the causes. Genetic, environmental, viral, and drugs can all contribute to the development of psoriasis. Autoimmune, hormonal, and psychological factors all have a role in the disease's progression. Psoriasis lesions are commonly round, red erythematous or plaques with a grey or silvery-white dry scale, which distinguishes them from these other conditions. Treatments for psoriasis aim to slow the proliferation of skin cells and get rid of scales. Topical treatments include creams and ointments; phototherapy; and oral or injectable medications are available.</p> <p>Lenalidomide, an immunomodulatory medication, inhibits the generation of pro-inflammatory cytokines, which have been linked to a variety of hematologic malignancies. Lenalidomide enhances the immune system of the host by modulating T cell proliferation, which contributes to inflammatory changes which are related to psoriasis etiology. The mechanism of action of lenalidomide is complicated. Lenalidomide affects cytokine production, T cell co-stimulation, and NK cell-mediated cytotoxicity, all of which have immunomodulatory properties.</p> <p>Objectives: This study tries to assess the effect of lenalidomide as an</p>			

ointment in the treatment of psoriasis compared to other treatments such as steroids. The mechanisms underlying their immunomodulatory actions are being investigated by investigating their effects on histological changes and immunohistochemical (IHC) biomarkers such as tumor necrosis factor alpha (TNF- $\alpha$ ) and interleukin-17 (IL-17) outcomes in experimentally induced psoriasis.

## **XXII**

**Materials and methods:** Between November 2021 and June 2022, 70 healthy male albino mice were randomly divided into seven groups of 10 mice each. Psoriasis was induced by imiquimod in groups (1, 2, 3, 4, 5 and 6). Group 1 was given only imiquimod cream 5% once daily for 6 days, and then was sacrificed and the skin treated area was removed and preserved in 10% phosphate buffered saline (PBS) for histopathological and IHC analysis. After induction, Clobetasol ointment was given to Group 2 for 6 days, placebo ointment was given to Group 3 for 6 days, and lenalidomide ointment (1%, 2%, and 3%) was given to Groups 4, 5, and 6, respectively, for 6 days. In Group 7, healthy mice were used as a comparison control. All mice were sacrificed, and the skin-treated area was removed and preserved in 10% PBS for histopathological and IHC analysis.

**Results:** Data reveals that lenalidomide ointment 1%, is effective in treating psoriasis. According to histopathology and IHC assay of biomarkers such as TNF- $\alpha$  and IL-17, the psoriatic area improved following treatment using lenalidomide. The difference between G1 and all other groups was significant ( $P < 0.05$ ). Results revealed that the differences between control and each of G1, G3, G5, and G6 were significant ( $P < 0.05$ ). The differences between control group G7 compared with G2 and G4 were not significant ( $P > 0.05$ ). These findings suggest that lenalidomide can treat imiquimod-induced psoriasis in mice due to its immunomodulatory and anti-inflammatory properties.

**Conclusion:** Findings suggest that different concentrations of lenalidomide ointment can improve mice with imiquimod-induced psoriasis. Histopathology and immunohistochemistry assays show that lenalidomide ointment was more effective with no side effects that were associated with the use of the standard drugs.

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Career	<input type="radio"/> Assistant Lecturer	<input type="radio"/> Lecturer	<input type="radio"/> Assistant Professor	<input type="radio"/> Professor
	<input type="radio"/> Master	<input type="radio"/> PhD	<input checked="" type="radio"/> Diploma	<input type="radio"/> Board
Thesis Title	Assessment And Follow up of Serum Electrolyte level(S Na <sup>+</sup> and K <sup>+</sup> ) in Patients with COVID19			
Year	2022		CD: 1561	
Abstract	<p><b>Background:</b> The severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2)-caused worldwide pandemic is causing unprecedented global morbidity and mortality. Cough and dyspnea are prominent symptoms .It has been reported that SARS-CoV-2 infects human cells by binding its spikes to the cell membrane's angiotensin converting enzyme 2 (ACE2) receptors, ACE2 plays an important role in the renin-angiotensin system (RAS), which regulates blood pressure and electrolyte balance.</p> <p><b>Goals of study:</b> To evaluate the electrolytes disturbance( serum sodium and potassium) in patients with SARS- COV- 2 infection , and Follow up the serum levels of these electrolyte in hospitalized patients with severe SARS-COV- 2 infection.</p> <p><b>Patients and methods:</b> Retrospective cross sectional study.</p> <p>The study is carried out on 150 cases as COVID 19 (50 cases mild , 50 cases moderate and 50 cases severe) the data collected from case records of patients who attend the private nursing home hospital and Baghdad teaching hospital during 2020-2021. This study was done over period of 4 months duration from November 2021 to march 2022,serum sodium and potassium were included in this study.</p> <p><b>Results:</b> Our study revealed that the highest percentage of hyponatremia was among the severe cases which represents about 32% of severe cases, less prevalence in mild and moderate cases.</p> <p>Serum potassium disturbance was observed in patients with SARS COV2 infection .In present study we found that hypokalemia and hyperkalemia of total patients are seem to be similar results . but there were statistically difference in incidence of serum potassium</p>			

**disturbance among different groups .**

**Sixteen percent of severe cases was hyperkalemia ,only 6% had hypokalemia.**

**When we compare the level of serum sodium and potassium in studied group during different period of admission we found no significant changes after one and two weeks of admission.**

**Acute kidney injury is important complication of SARS-COV-2 infection , our result was 10% of severe COVID19 patients have AKI during period of admission.**

**Conclusion: Hyponatremia and hyperkalemia were most common electrolyte disturbance in SARS-COV-2 infection mainly in severe cases.**

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Thesis Title	Diabetes mellitus impact and complications in COVID-19 patients			
Year	2022		CD: 1562	
Abstract	<p>Chronic hyperglycemia associated with diabetes can compromise innate and humoral immunity. Furthermore, diabetes is associated with a low-grade chronic inflammatory state that favors the development of an exaggerated inflammatory response and therefore the appearance of acute respiratory distress syndrome .</p> <p><b>Aim of the study:</b></p> <p>The association between the presence of Diabetes mellitus and the severity of COVID-19 infection in COVID-19 infected patients. Assessment of complication during COVID-19 infection in diabetes mellites patients. Assessment of the impact of diabetes mellitus on COVID 19 infection.</p> <p><b>Patients and methods:</b></p> <p>A retrospective study, that involved a recently diagnosed COVID</p>			



infected patient. The study was carried out in Special Nursing House Hospital, and Al-Shifa Specialized Medical Center. The study started in December 2021 and completed April 2022 (about 5 months).

**Results:**

The study included 208 patients, 102 was none diabetic COVID patients and 106 had DM COVID, there was no significant difference between both groups in terms of gender, age, and hypertension .The frequency of critical (26.4% vs. 12.7%) and severe COVID-19 (55.7 vs. 38.2%) was significantly higher in DM compared to none DM .Severe and critically VI

ill COVID patients was significantly associated with DM compared to mild – moderate COVID patients (4-, and 5.7- folds respectively) . Diabetic patients had significantly higher percentage of pneumonia, ARDS, ICU admission, mechanical ventilation, and mortality rate .

**Conclusions:**

Diabetes mellitus is a risk factor for more severe and critical COVID infection, diabetes mellitus is a predictor for morbidity and mortality.

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Thesis Title	Home Treatment Of Moderate COVID-19 Pneumonitis Patients With Hypoxemia And It's Cost Effectiveness			
Year	2022		CD: 1563	
Abstract	<p><b>Background:</b> Severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2) is the novel virus responsible for the recent worldwide health concern due to its high transmissibility &amp; mortality rates. After primary infection, the patient either continues to be asymptomatic, or develops symptoms including fever, fatigue, cough, myalgia, loss of smell or gastro-intestinal complaints, so called mild disease. Mild disease may change to moderate disease as the lower respiratory tract becomes infected leading to critical disease. Some COVID-19 patients present with 'Silent hypoxia', in which the patient complains from breathlessness but with no respiratory distress signs. Oxygen therapy is important in COVID-19 treatment as it can disrupt viral replication, improve the antiviral ability of patients with early COVID-19 by increasing the abundance and activities of immune cells .</p> <p><b>Aims of the study:</b> To assess if oxygen home treatment for those with moderate COVID-19 pneumonitis is safe and non- inferior to hospital treatment &amp; to assess cost effectiveness through reducing the impact on existing hospital capacity by measuring the number of hospital beds days saved.</p> <p><b>Patients And Methods:</b> Retrospective cross sectional study had conducted at Thi-Qar Lung Disease institution among moderate COVID-19 pneumonitis patients. The study included 322 patient episodes (184 male and 138 females of age ranging from 20-84 for males and 25-80 for females) of moderate COVID-19 pneumonitis diagnosed according to World Health Organization and European Respiratory Society guidelines for severity classification .The data was collected</p>			

during a period of 3 months from January 2022 to March 2022 involving the patients who visited the institution from 28th of September 2020 to 24th of September 2021.

#### **VI**

**Results:** The mortality rate of those treated at home about 10 % non-inferior to those with equivalent severity treated in the hospital in the developed world . The total bed days saved for all the patients in this cohort was about 4508 days and more if the patient needs the concentrator for more than two weeks. The actual cost saved in this cohort study was about 1,021,096 \$.

**Conclusion :** Treating patients with moderate COVID-19 pneumonitis at home is cost effective & safe. The mortality rate was non-inferior to that observed in hospitalized patients with moderate COVID-19 in the developed world.

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Thesis Title	Effect of Immunogenicity on Efficacy and Safety of Infliximab Biosimilar (Remsima) Compared to Infliximab Originator (Remicade) in Iraqi patients with Ankylosing Spondylitis			
Year	2022		CD: 1564	
Abstract	<p>Background: Ankylosing spondylitis is a chronic, progressive immunemediated arthritis that is associated with absence of rheumatoid factor. Radiographic sacroiliitis is the key distinguishing feature of ankylosing spondylitis although patients usually report symptoms such as back pain for several years before radiographic changes are observed. Medications known as nonsteroidal anti-inflammatory drugs and substances called tumor necrosis srotcai oniorotcaf are the backbone of the pharmacological treatment. The importance of using biological treatments is for the ability of these types of drugs to successfully reach treatments target as reducing disease activity and improving patients' quality of life. A biosimilar is a biotherapeutic agent that is similar in quality, safety, and efficacy to an existing licensed reference biotherapeutic agent. The necessity for inventing and producing Biosimilars for innovator biologics is to reduce cost for treatments and also, obtain the same clinical outcomes for original biologicals. On the other hand, some individuals</p>			

develop immunogenicity to medications of this kind, which may limit the clinical effectiveness and safety of the treatments as the infusion-related reaction may appear.

**Aim:** The present study was designed to evaluate the clinical efficacy and safety

of the biosimilar infliximab (CT-P13; Remsima) compared to original infliximab (Remicade) in Iraqi patients with Ankylosing spondylitis.

**Methods:** A cross-sectional study was conducted from December 2021 to

March 2022 at the Rheumatology Unit, Baghdad Teaching Hospital/Medical

City, Baghdad. Ninety-four patients with ankylosing spondylitis on biological

treatment were included in the study. Of these patients, 44 patients were taking

the biological agent Infliximab (Remicade) 5mg/kg, and another 50 patients

were taking CT-P13 (Remsima) 5mg/kg, the biosimilar of infliximab. Both

groups of patients were at least 3 months on either treatment at the time of

II

recruitment in current study. Disease activity was assessed by Ankylosing

spondylitis Disease Activity Score with CRP while antibodies and C-reactive

protein levels detected by using Enzyme-Linked Immunosorbent Assay technique. Statistical analyses were performed using SPSS (version 20.0 for

Windows, SPSS, Chicago, IL, USA). Quantitative data were presented as mean,

standard deviation, and range. Median and Inter Quartile Range were used to

describe Anti-Infliximab antibodies and C-reactive protein as their distribution

was non-normal (Kolmogorov-Smirnov test). Qualitative data were presented as

counts and percentages. A *P*-value of <0.05 was considered statistically significant.

**Results:** Patients on Remsima had statistically significant higher disease activity (*P*<0.05) than patients on Remicade. Also, the former group had higher

antibody titer (immunogenicity) than the other group (*P*<0.05). However, there

were no significant correlations between immunogenicity of either

	<p>treatment with demographic characteristics of participants or hypersensitivity reactions experienced by participants, except for smoking and ASDAS-CRP for patients on Remsima were significantly correlated with immunogenicity (<math>P&lt;0.05</math>).</p> <p>Conclusion: Immunogenicity of infliximab or its biosimilar (CT-P13) may result in reduced therapeutic effectiveness manifested as increased disease activity. In addition, such immunogenicity may not be affected by demographic characteristic of patients.</p> <p>Keywords: Ankylosing spondylitis, Biologics, Biosimilar, Disease activity, Immunogenicity.</p>
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Thesis Title	The Assessment of Fatigue in Ankylosing Spondylitis Patients in a Sample of Iraqi Patients			
Year	2022		CD: 1565	
Abstract	<p><b>Background:</b> Ankylosing spondylitis (AS) is a chronic and systemic seronegative inflammatory spondyloarthropathy, which causes destruction and fusion of the spinal vertebrae and sacroiliac joints. Fatigue is another common complaint of AS patients. Fatigue, which is the enduring, subjective sensation of generalized tiredness or exhaustion, is affected by vareity of biological, psychological, social and personal factors.</p> <p><b>Objectives:</b> To determine the prevalence of fatigue in AS and its relationship with other clinical and functional parameters.</p> <p><b>Patients and Methods:</b> This cross-sectional study was conducted at the Rheumatology Unit in Baghdad Teaching Hospital during the period from 1st November 2021 to 1st April 2022. A total of 150 consecutive patients diagnosed to have AS according to the modified New York criteria. Both males and females and age from 18 years old and above were included in this study.</p> <p><b>Sociodemographic and disease-related data,</b> specifically the Bath Ankylosing Spondylitis Disease Activity Index (BASDAI), Bath Ankylosing Spondylitis Functional Index (BASFI), Bath Ankylosing Spondylitis patient Global score (BAS-G), Multidimentional Assessment of Fatigue (MAF), Ankylosing Spondylitis Quality of Life (ASQOL) and spinal mobility measurements</p>			

were measured. Fatigue in AS patients measured by BASDAI-Fatigue then calculating the MAF score for them. Correlation between MAF and BASDAI, BASFI, BAS-G, ASQOL, spinal mobility measurements and Disease related data were analysed.

Results: This study showed 82 of 150 studied patients (55%) had fatigue.

Female patients were significantly associated with fatigue P value=0.001. No significant correlation between age, disease duration, CRP, and MAF, p value>0.05 in all variables. Highly Significant positive correlations were noticed between morning stiffness duration, rest pain, pain with activity, ESR, BASDI, night pain, BASFI, ASQOL, Occiput wall, and MAF, p value<0.01 in all variables. Significant positive correlation were noticed between BASG, finger floor and MAF, p value<0.05 in both variables. Highly significant negative correlation noticed between Schober test, chest expansion and MAF, p value<0.01 in both variables. Significant negative correlation found between hemoglobin and MAF, p value=0.035. The mean of MAF score of NSAID users was lower than that of non users, p value=0.01. The mean of MAF score of employed patients was higher than that of unemployed. P value=0.001.

Conclusions: Fatigue is an important symptom in AS account for approximately 55% of them, can appropriately be measured with both a single-item question in BASDAI, and with the MAF. Fatigue appears to be highly significantly associated with pain, low hemoglobin level, some metrological measures, disease activity and health-related quality of life in AS patients. Moreover fatigue may increase functional disability, which is already present as a feature of the disease. Fatigue may considered as an independent domain to be systematically evaluated in AS patient.



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Thesis Title	Prevalence of Fibromyalgia Syndrome Among Iraqi Patients with Type 2 Diabetic Mellitus			
Year	2022		CD: 1566	
Abstract	<p>Fibromyalgia syndrome is a non-autoimmune rheumatological disorder characterized by chronic widespread pain, and often tenderness, and may also include additional symptoms such as fatigue, lack of sleep, anxiety, and cognitive problems which are considered significant features in this syndrome.</p> <p>Diabetes mellitus is a chronic metabolic disorder characterized by hyperglycemia due to absolute or relative insulin deficiency, and also there may be defect in insulin action (resistance).</p> <p><b>Objective</b> To evaluate the prevalence of fibromyalgia in Iraqi diabetic patients and to assess the correlation of fibromyalgia with control of diabetes mellitus.</p> <p><b>Patients and Methods</b> A case-control study was conducted at Endocrine outpatient and Rheumatology unit at Baghdad Teaching Hospital during the period from November 2021 till April 2022. A total of consecutive sample of 200 Iraqi patients with Diabetes mellitus type 2 diagnosed according to the ADA criteria for diagnosis of diabetes mellitus (females 128 and males 72) and a total of consecutive sample of 200 Iraqi without history of diabetes mellitus (126</p>			

females and 74 males) were involved in this study as controls. A special questionnaire designed for the purpose of the study was used for recording information from the patients and controls, which include demographical data for both groups, in addition informations about current treatment for DM and duration of disease were obtained. The 2016 revision of American College of Rheumatology criteria was used for the diagnosis of fibromyalgia syndrome.

**VIII**

**Results**

This study showed that there was an increase in the risk of developing fibromyalgia syndrome among diabetes mellitus patients compared to normal individuals (31% vs. 14.5%). Moreover, widespread pain, symptom severity score, and depression were significantly higher [P. Value= (0.012, 0.007, and 0.019)] among diabetes mellitus patients compared to healthy individuals. It was found that there was a significant increase of having high HbA1c among fibromyalgia patients compared to healthy individuals (P value= 0.001).

**Conclusion**

The prevalence of fibromyalgia among a sample of Iraqi patients with type 2 diabetes mellitus is high and there was positive correlation between the prevalence rate of fibromyalgia syndrome and poorly controlled diabetes mellitus.

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Thesis Title	Knowledge, Attitudes, and Practices toward Epilepsy among Parents of Children having Epilepsy, Baghdad, Iraq 2022			
Year	2022		CD: 1657	
Abstract	<p><b>Background:</b> Epilepsy is one of the most common neurological disorders. About 50 million subjects suffer from epilepsy worldwide. Most of them (85%) are from developing countries. People who know less about epilepsy tend to have negative thoughts about the disease.</p> <p><b>Objectives:</b> To assess the knowledge, attitude, and practice (KAP) toward epilepsy among a sample of Iraqi parents having epileptic children.</p> <p><b>Methods:</b> A cross-sectional study was conducted in the consultation clinics in the Children Welfare Teaching Hospital, Baghdad-Iraq, from the 1st of January 2022 to the 30th of July 2022. This study involved all parents with children (their age up to 18 years) diagnosed and received treatment for epilepsy. A convenience sampling technique was used. The information was gained by direct interviews with the participants. The questionnaire was composed of family sociodemographic characteristics, data concerning the child's epilepsy history that had been diagnosed as Epilepsy by the pediatric neurologist and kept on treatment and follow up, knowledge, attitude, and practice among parents toward childhood epilepsy. A Chi-square test with a P-value of &lt;0.05 was used to assess the level of significance.</p> <p><b>Results:</b> parents' mean age was 34.55±8.103 years, while the mean age of children was 4.37±3.19 years. As reported by the family, the most common cause of the disease was unknown among 70 (65.4%) parents. Good knowledge was shown among 61 (57.0%) parents, a good attitude was demonstrated among 70 (65.4%) parents, and good practices were conducted among 90 (84.1%) parents. Good knowledge of epilepsy among parents of children having epilepsy was associated significantly with higher education (college) and with fewer family members (&lt;5), (P&lt;0.001 and P=0.0002), respectively. In addition, a good attitude towards epilepsy VII</p>			

	<p>among parents of children having epilepsy was associated significantly with higher education (college), <math>P=0.015</math>.</p> <p><b>Conclusion:</b> About half of parents have good knowledge, two third have a good attitude, while most have good practices towards epilepsy. It was found that parents of children having epilepsy with higher education and fewer family members have good knowledge and attitude. Educational programs targeting caregivers of epileptic children can upgrade their knowledge, attitudes, and practices.</p>
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Thesis Title	Outcomes Following Mandatory Switching from Originator to Biosimilar Tumor Necrosis Factor inhibitors (Adalimumab and Infliximab) in patients with Ankylosing Spondylitis			
Year	2022		CD: 1568	
Abstract	<p>Ankylosing Spondylitis (AS) is a chronic inflammatory rheumatic disease characterized by progressive ankylosis of the axial skeleton, asymmetric peripheral arthritis associated with various extra-articular manifestations such as uveitis, renal, cardiac, and pulmonary manifestations.</p> <p>Tumor necrosis factor-alpha (TNF <math>\alpha</math>)-inhibitor treatment is currently only effective therapy in AS for whom conventional therapy with nonsteroidal anti-inflammatory drugs (NSAIDs) has failed.</p> <p>Biosimilar may be defined as a biotherapeutic product that is similar in terms of quality, safety and efficacy to an already licensed reference biotherapeutic product. Due to their assumed lower price, biosimilars have the potential to reduce costs and increase patient access and drug therapy adherence.</p> <p>The aim of this study was to evaluate the clinical and laboratory responses after switching from adalimumab and infliximab originators to their biosimilars in ankylosing spondylitis patients.</p> <p><b>Patients and Methods</b></p> <p>This is a single center cross-sectional study that carried out at the Rheumatology Consultant Clinic and Biological therapy Unit of Baghdad</p>			

	<p>Teaching Hospital which included total 65 consecutive patients diagnosed to have ankylosing spondylitis according to modified New York criteria for ankylosing spondylitis. The collected data included sociodemographic characteristics, disease characteristics [disease duration, current medications, and disease activity by measuring the Bath Ankylosing Spondylitis Disease Activity Index (BASDAI) and functional ability by measuring the Bath Ankylosing Spondylitis Functional Index (BASFI)] and laboratory data including: hemoglobin, white blood cell, erythrocytes sedimentation rate, liver function test and renal function test.</p> <p><b>Results</b></p> <p>Twenty-five patients treated with Remicade in the first period and Remsima in the second period, the results showed that the mean difference of BASDAI and BASFI before and after giving Remicade was not significantly different from that measured before and after giving Remsima (P. value=0.18 and 0.8) respectively. Also showed that BASDAI and BASFI before were found to be significantly higher than BASDAI and BASFI after in both Remicade and Remsima group, (P value= 0.001) in all conditions.</p> <p>Forty patients were treated with Humira in the first period and Amgevita in the second period, the results showed that the mean difference of BASDAI measured before and after giving Humira was significantly higher than that measured before and after giving Amgevita (P value=0.001). No significant difference in mean difference of BASFI measured before and after giving Humira from that measured before and after giving Amgevita (P value=0.2)</p> <p>The study also showed the BASDAI and BASFI before were found to be significantly higher than that BASDAI and BASFI after in both Humira and Amgevita group of treatment (P value= 0.001) in all conditions.</p> <p>The laboratory measures of patients were not affected by switching treatment of ankylosing spondylitis to biosimilars of both Infliximab</p>
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	<p>and</p> <p>Adalimumab, (P value &gt;0.05) in all conditions.</p> <p><b>Conclusion</b></p> <p>The switching treatment of ankylosing spondylitis to biosimilars for both</p> <p>Infliximab and Adalimumab is accompanied with acceptable outcomes regarding efficacy.</p> <p><b>VII</b></p> <p>The laboratory measures of patients were not affected by switching treatment of ankylosing spondylitis to biosimilars of both infliximab and adalimumab.</p>
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Thesis Title	The Incidence and outcome prediction of covid 19 in a sample of adult asthmatic iraqi patients			
Year	2022		CD: 1569	
Abstract	<p>Background: Asthma is a chronic inflammatory airway disease in which many cells and cellular components play an essential role. The prevalence of asthma is estimated at around 3–34% worldwide. It is more expected for an asthmatic individual to develop an asthmatic attack caused by other triggers, including allergens or other virus exposures; this suggest an increased in the prevalence of COVID-19 among individuals with asthma compared to the general adult population.</p> <p>Aim of the study: to evaluate the Incidence and outcome prediction of covid 19 in a sample of adult asthmatic iraqi patients</p> <p>Patients and methods: A cross sectional study was conducted from January 2022 to May 2022 on 75 asthmatic patients aged 18 years or older infected with COVID 19, attended respiratory out clinic in Baghdad teaching hospital in Medical city or admitted to isolated ward in Dar Al-Shefaa hospital. Mean age was 44.25±12.216 years, and male to female ratio was 1.1:1. Data collection was done using a structured questionnaire. Chi square test and Independent sample t-test were used Odd Ratio to estimate risk of mortality was used P value ≤0.05 was considered as statistically significant. The official agreement was obtained.</p> <p>Results: out of the total; 69.3% of patients were 40 years or older, 49.3% of patients had exacerbation of asthma 3 times/ year and 24% had exacerbation of asthma 2 times/ year; Only 30.7% of asthmatic patients had control their disease; 64% of patients need hospitalization; 81.3% of patients were survived while 19.7% were died. 53.3% of</p>			



patients had post COVID-19 Complications; 20% had post COVID-19 fibrosis.. Comorbidities (like HF, IHD) represented a potential risk for mortality  $P=0.003$ . Normal Spo2, didn't need for (hospitalization, NIV, or ICU) appeared to be protective factors against mortality with significant differences. Needed for mechanical ventilation represented a potential risk for mortality with significant difference (OR= 10, 95% CI=4.8-20,  $P<0.001$ ).

**Conclusion:** Older asthmatics with COVID-19 considered risky for mortality and post covid-19 complications. However the young, single asthmatics with controlled treated asthma, that didn't need for hospitalization or mechanical ventilation appeared to be protective against mortality.

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Thesis Title	Clinical Outcome of Covid 19 Patients Treated with Remdesivir			
Year	2022		CD: 1570	
Abstract	<p><b>Background:</b> Remdesivir is a broad-spectrum antiviral drug candidate developed by Gilead Sciences. The primary clinical indication of remdesivir is for the treatment of Ebola virus (EBOV) infection, but the drug has not been approved for sale in any country in the world due to its poor efficacy in phase III clinical trial for Ebola virus disease (EVD). Remdesivir has been demonstrated to exert activity against the coronavirus pathogens Middle East respiratory syndrome-related coronavirus (MERS-CoV) and SARS-CoV, which are structurally like SARS-CoV-2.</p> <p><b>Aim:</b> For assessing the outcome of COVID-19 patients treated with Remdesivir.</p> <p><b>Methodology:</b> A retrospective observational study was conducted on one hundred four of patients with confirmed COVID-19 and were admitted to the isolation ward of the Al-Sadr General Hospital in Maysan governorate of Iraq from the period extended from the beginning of April to the end of September 2021.</p> <p><b>Results:</b> There were 104 COVID 19 patients participated in this study, their mean age was <math>55.29 \pm 15.715</math> years. 42.3% of patients aged 60 years or older and 43.3% were within age group 40-59 years. Out of the total patients, 51.9% were males and 48.1% were females, 87.5% were hypoxic, 87.5% were tachypneic, 47.1% hospitalized for 7 days or less and 36.5% were hospitalized for 8-14 days. The mean distribution of biochemical markers according to the severity of the disease, and LDH means were significantly higher among patients with disease outcome <math>P &lt; 0.05</math>. For prediction of diagnosis (depending on death group) in the study, ROC analysis for diagnostic indices of ferritin, CRP and LDH were done. Comparison of the area under curve (AUC) revealed that CRP and LDH had have the widest area under the curve, they were</p>			

good predictors (0.815 and 0.809) respectively II with significant association,  $p < 0.001$ . CRP cut-offs point of 47.5 or higher predicted mortality, while LDH cut-off point of 520 or higher predicted mortality.

**Conclusion:** Increased level of serum ferritin is found to be associated with COVID-19 severity but not outcome. The elevation of CRP is a crucial inflammatory index for severity and strong correlation with the disease activity and outcome. Same is applied to observed LDH which an important biomarker for disease severity and outcome. Distribution of severe COVID-19 is found to be with the highest proportion among elderly people, and this association found to be significant in the study. The measurement of O<sub>2</sub> saturation serves as signal of respiratory distress, and respiratory failure has been found clinically as one of the major mortality causes of COVID-19. About the length of stay, it has an impact on severity of illness and co-morbidity according to their admission duration. Remdesivir was without clinical importance in increasing survival rate among severe COVID-19 patients. However, it had a significant importance in recovery among mild and moderate COVID-19 cases.

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Thesis Title	ASSESSMENT OF MORTALITY AMONG PREGNANT WOMEN WITH COVID 19 INFECTION			
Year	2022		CD: 1571	
Abstract	<p>The coronavirus disease 2019 (COVID-19), caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), is a global public health crisis ,The impact of COVID-19 on specific populations, including pregnant women and their newborns, remains mostly unknown and unstudied.The impact of COVID-19 on specific populations, including pregnant women and their newborns, remains mostly unknown and unstudied.</p> <p><b>Aim of the study :</b></p> <p>Assessment of the maternal mortality among pregnant Iraqi women with covid 19 infection and Assessment of risk factors of maternal mortality .</p> <p><b>Method:</b></p> <p>An observational ,prospective cohort study on 69 pregnant women(aged between 18-40 ) diagnosed with covid 19 infection by PCR carried out in Baghdad teaching medical city complex.</p> <p><b>Result:</b></p> <p>In this study (10) from (69)pregnant patient infected with covid 19 (aged between 18_40 years) died during the course of their infection,(the mortality rate 14.49%). Elevated WBC count ,CRP,D.Dimer,the presence of other disease such as Diabetes mellitus and Hypertension and admission to intensive care unit associated with high mortality .</p> <p><b>Conclusions:</b></p> <p>The mortality rate in this study is high (14.49%) in association with certain risk factors.</p>			

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Thesis Title	Effect of Different Laser Wavelengths on Certain Semen Parameters			
Year	2022		CD: 1572	
Abstract	<p>Male infertility is the term used to describe a man's inability to have a child with a fertile woman after 12 months of continuous, unprotected sexual activity (Khaleefah <i>et al.</i>, 2018).</p> <p>Infertility is a problem that needs to be solved; many researchers and infertility doctors work hard for this purpose. Seminal fluid analysis is the first test that needs to be done to study the shape, count, and activity of sperm. Sperm motility is important to initiate fertilization. For this reason, many different techniques tend to be used for the important of motility. One of the most important ones is the laser. The initial studies clearly show that laser irradiation may increase human sperm motility and velocity; lasers were first employed in the 1980s and 1990s to treat infertility. Thus, the aim of the current study is to compare effects of two different types of laser exposure on the semen characteristics of infertile men.</p> <p>In this study, 50 semen samples were selected from infertile men referred to the "High Institute for Infertility Diagnosis and Assisted Reproductive technologies, Al-Nahrain University", through the time from December 2021 to April 2022. Standard seminal analysis was done to measure sperm concentration, motility, morphology, and agglutination according to The World Health Organization 2010 (WHO 2010) guidelines.</p> <p>Each sample was divided into 4 equal volumes of 0.5 ml, the first untreated part was used as a control, and the other 3 parts were employed as treatment groups. The second treatment group was irradiated by a diode red laser power of 128 mW, the third group was treated with diode green laser power of 54 mW, both at a distance of 2</p>			

cm between the source of laser and the semen sample. II

The exposure time were (10,20,30)min respectively, the fourth part was treated with Hams –F 12 medium and activated by swim-up technique for 30 min. The semen samples were of a concentration that is greater than  $20 \times 10^6/\text{ml}$ , while the volume of ejaculate was equal or greater than 2 ml.

Results of present work found that the green and red laser exposure to the samples of asthenozoospermia, oligozoospermia and abnormal agglutination semen for 10,20 and 30 min resulted in increase of the percentage of progressive sperm motility with decrease in abnormal sperm agglutination significantly compared to before exposure . However, there was no significant difference in morphologically normal sperm percentage compared to before the two lasers exposure.

As the result, shows a significant increase in the percentage of progressive sperm, a decrease in the percentage of immotile sperm, and the important benefit was a significant decrease in the agglutination. This improvement due to the laser effect means a higher number of progressive sperms that are ready to fertilize the oocytes in IVF or IUI programs.

It is concluded from the present study that both green and red laser exposure improved certain sperm parameters and shows a role in decreasing abnormal agglutination in comparison to culture media used. Therefore, Laser is considered a useful tool in ART centers.

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Thesis Title	C-Reactive Protein/Albumin Ratio as Predictor of COVID-19 Severity and Mortality			
Year	2022		CD: 1573	
Abstract	<p>Background Early identification of patients with coronavirus disease (COVID-19) at an increased risk of progression may promote more individualized treatment schemes and optimize the use of medical resources. C-reactive protein (CRP) and albumin are inflammation sensitive parameters.</p> <p>Aim of study To evaluate the ability of CRP/Alb ratio in prediction of severity and mortality in the context of COVID-19 infection.</p> <p>Method We retrospectively reviewed 130 patients with COVID-19 with confirmed outcomes (discharged or deceased) admitted to the private nursing home \ medical city, Baghdad, Iraq, between January - October 2021.</p> <p>Patients are divided into mild, moderate and severe, and into dead and alive patients. To predict disease progression, CRP, albumin and CRP\Alb ratio were evaluated on admission.</p> <p>Result A study of 130 patients with COVID 19 infection, mean age (53.80 ± 16.33) years old, (48.5%) of patients are females while (51.5%) of patients are males. (66.92%) of patients have severe infection while (33.08%) of</p>			

	<p>them have non-severe ( mild and moderate) infection with COVID 19. High CRP\Alb ratio occur more in severe COVID infection and those who died than non severe (mild and moderate) and who discharged alive, respectively. <b>Conclusions:</b> The CRP/Alb ratio can predict the risk of progression to severe and death early, providing a promising prognostic biomarker for risk stratification and clinical management of patients with COVID-19. <b>Keywords:</b> CRP\Alb ratio, covid 19, severity, mortality.</p>
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Thesis Title	The Impact of COVID-19 on Some Sex Hormones and Menstruation in a Sample of Child-Bearing Age Iraqi Women			
Year	2022		CD: 1574	
Abstract	<p>As the COVID-19 pandemic enters its third year, it is clear that its effects extend beyond the respiratory system and are clinically significant.</p> <p>These consequences may also have an influence on health and quality of life.</p> <p>women may have experienced transitory changes in their menstrual patterns as a result of stressors related to the COVID-19 pandemic. and this change could have been caused by stress and anxiety. Features of the menstrual cycle are also increasingly being recognised as vital signs acting as both indicators of health and well-being. Infrequent or absent menstruation can be an indicator of reduced fertility, which itself can be associated with a number of chronic conditions. Problematic heavy bleeding may cause anaemia, has a significant negative impact on quality of life and is a huge socioeconomic burden for women, their families, health services and society.</p> <p><b>Objective</b></p> <p>Studying the effect of the Corona virus on changes in the menstrual cycle of child-bearing age Iraqi women by measuring some female sex hormones affecting the menstrual cycle , including : luteinizing hormone (LH) , follicle stimulating hormone (FSH) , prolactin (PRL), and</p>			

estradiol  
(E2) .

#### **Subject and methods**

This is a cross-sectional study that was conducted in the Baghdad Teaching Hospital (Gynecology department ) in Baghdad, Iraq , from November 2021 to April 2022. The study sample consisted of 150 married women of child-bearing age who were between the ages of 18 and 40 years , matched in age and BMI . The first group consists of 50 women who had amenorrhea for at least three months after being infected with COVID-19; the second group consists of 50 women who had a heavy period for at least three months after infected with COVID-19 , It has been done to make the polymerase chain reaction (PCR) test for participant women to be certain of infection or not in COVID-19 ; and the third group consists of 50 women of control group . Each group's hormonal status (LH, FSH, PRL, E2) was measured using serum from each sample.

#### **Results**

The mean  $\pm$  SD values of LH( 0.000 ) , PRL(0.003) ,and E2 (0.024) were statistically highly significant in women who experienced amenorrhea after infection with COVID-19 compared with non-COVID-19 women .There was significant positive correlation between LH and FSH (0.327) , and a significant negative correlation between LH and PRL (-0.279). The mean  $\pm$  SD values of LH (  $p < 0.000$  ) , PRL (0.001) , and E2 (0.000) were statistically highly significant in women who experienced heavy bleeding after infection with COVID-19 compared with the non-COVID-19 women. There was significant positive correlation between LH and FSH (0.327) , and a significant negative correlation between LH and E2 (0.257).

#### **Conclusion**

Stressors during the COVID-19 pandemic have had an impact on the menstrual patterns of women, but this effect was temporary and might be due to stress and anxiety affecting the secretion of menstrual hormones and

**causing amenorrhea or heavy bleeding .**

**There was a change in some sex hormones measured in this study of Iraqi**

**women's after they were infected with the Corona virus (LH ,PRL, and E2).**

**The LH hormone had the most change . In the amenorrhea state, LH had a**

**positive correlation with FSH and a negative correlation with PRL, while in**

**the heavy bleeding state, LH had a positive correlation with FSH and E2.**

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Thesis Title	ASSOCIATION OF INFLAMMATORY MARKER LDH,CRP WITH SEVERITY OF COVID19			
Year	2022		CD: 1576	
Abstract	<p><b>Background:</b> A catastrophic health issue was striking the world that makes the global health services disparate for any hope to find the solution to the problem that threatened the life of millions of universal inhabitants. It was discovered in 2019 in Wuhan-China and this syndrome addressed as Covid-19 caused by Corona virus.</p> <p><b>Aim of the study:</b> The study conducted to evaluated the serum level of LDH and CRP as predicting factors in classification of COVID 19 patients according to severity.</p> <p><b>Patient and method:</b> A cross-sectional study was conducted at Baghdad Teaching Medical city complex, hospitalized patients. The study was continuing for 3 month began at January 2022 and completed March 2022. The study enrolled 50 severe cases infected with Covid-19 diagnosed according the WHO (World Health Organization) guideline for COVID-19 diagnosis. Several Laboratory investigations (hematological tests (complete blood count), coagulation tests (D-Dimer), Biochemical tests (renal function tests (creatinine, urea), liver function tests , serum ferritin, erythrocyte sedimentation rate (ESR), lactate dehydrogenase (LDH), and C-reactive protein (CRP)) and radiological imaging (chest computed tomography (CT-scan). Data was collected and analyzed using SPSS 23.</p> <p><b>Result:</b> The study was included 50 patients with mean age <math>60.3 \pm 14.5</math>. the male to female ration was 1.9:1. LDH mean level at admission was <math>287.4 \pm 126.2</math>, second test was <math>425.2 \pm 97.3</math> and on discharge was <math>347 \pm 83.1</math>. On other hand, first test of CRP was <math>39.1 \pm 7.3</math> after this the mean was <math>87.2 \pm 12.4</math> and on discharge was <math>54.6 \pm 10.5</math>. More over, 86% of patients was discharger alive while only seven patients were died. The second test of LDH and CRP level were higher in patient was dead than patient</p>			

	<p>that survival after disease, these difference were statistically significant. In addition, the serum level of LDH in age group over 50 years was higher than younger patients <math>486.5 \pm 110.6</math> and <math>399.2 \pm 99.3</math> respectively. The same manner show by CRP with p value 0.03.</p> <p><b>Conclusion:</b> The present study conclude the level of LDH and CRP was high in critical patients than severe patients.</p> <p><b>Key words:</b> Corona virus, COVID-19, clinical characteristics, radiological manifestations, laboratory investigation</p>
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<b>Thesis Title</b>	<b>Functional Tricuspid Regurgitation, related to left side heart diseases, Prevalence and Echocardiographic finding</b>			
<b>Year</b>	<b>2022</b>		<b>CD: 1577</b>	
<b>Abstract</b>	<p><b>Background:</b> Backflow of blood into the atrium is referred to as tricuspid regurgitation (TR), which occurs when the tricuspid valve's leaflets do not correctly coapt during ventricular systole. The population has an 80% detection rate for TR, which is common. The pathogenesis is complex because to the variability of the etiology, and a large body of evidence suggests that the severity of TR is associated with PAH and a reduced left ventricular ejection fraction (LVEF).</p> <p><b>Aim of the study:</b> To assess the prevalence of functional tricuspid regurgitation in related to left side heart diseases. And to determine the echocardiographic parameters relation according to severity of the functional tricuspid regurgitation</p> <p><b>Patients and methods:</b> a descriptive cross-sectional study using transthoracic echocardiography among 153 consecutive patients to measure the relationship between routine echocardiographic measures and FTR in various cardiac pathologies.</p> <p><b>Results:</b> There were 153 patients with Tricuspid regurgitation, (51% females, mean±SD 58.6±13.4 years). 49% of the participants had diastolic dysfunction grade 1, 33.3% had mitral regurgitation. 21% had hypertension.</p> <p>76% of the tricuspid regurgitation was mild grade, 12% for moderate</p>			

and severe TR. There was a significant association between the left side heart disease and comorbidity factors with the severity of TR. Echo parameters found to be significantly associated with the severity of TR. While tricuspid valve morphology was not associated with the severity.

**Conclusion:** Functional Tricuspid valve regurgitation (FTR) is a common finding on routine echocardiography, however, the clinical impact of Functional tricuspid valve regurgitation (TR) is in most cases undetermined and its mostly related to left side cardiac diseases like diastolic dysfunction and mitral regurgitation while hypertension found to be a risk factor in mild grading FTR. the prevalence of moderate to severe FTR was 12% while the majority 76% had mild FTR.

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Thesis Title	Overview of salivary gland tumors treated by adjuvant external beam radiotherapy			
Year	2022		CD: 1578	
Abstract	<p><b>Background:</b> Salivary gland tumors are rare tumors and the main treatment is surgical. The addition of radiotherapy to surgery decreases locoregional relapses in high risk patients. The aim of our retrospective study was to evaluate the outcome, especially locoregional control of patients and the factors affecting them; after postoperative external beam radiotherapy in a single center.</p> <p><b>Aims of the study:</b> To assess salivary gland tumors control by postoperative EBRT, evaluate radiation coverage in 3 dimensionl conform radiotherapy and its effect on tumor control, Review of radiation dose to organ at risk, and Study the association between prognostic factors and outcome</p> <p><b>Materials and methods:</b> The medical records of 60 patients with salivary gland tumor operated on and referred to our center (Baghdad Radiotherapy and Nuclear Medicine Center, Baghdad Medical City Complex, Baghdad, Iraq ) for adjuvant RT between January 2018 and February 2022 were retrospectively evaluated. RT was applied to the primary tumor and/or its lymphatics in a median dose of 66 Gy (60-70 Gy) in 1.8-2 Gy/ fraction.</p> <p><b>Results:</b> The mean period of follow-up was 28.07±11.053 months. The mean duration between surgery and RT was 9.92±4.056 weeks. The primary sites of salivary glands cancer studied as; 43(71.7%) cases of parotid cancer as a common type documented, 7(11.7%) cases of submandibular tumors, 4(6.7%) cases of sublingual tumors, and</p>			



6(10%) cases of minor salivary gland tumor. Histopathologically, the most common tumor was 20(33.3%) cases of adenoid cystic carcinoma followed by 17(28.3%) cases of mucoepidermoid carcinoma. At the last follow-up time, 55 patients (91.7%) were free from relapse. The parameters correlating significantly with the incidence of relapsing or recurrence were age [ $\leq 53$  vs.  $>53$ ] ( $P=0.001$ ), histologic subtype [non-adenoidcystic vs. adenoid cystic] ( $P=0.05$ ), resection margin [R1/2 vs. R0] ( $P<0.0001$ ), and high radiation dose [7000cGY vs. 6600/6000cGY] ( $P=0.014$ ). In univariate and multivariate analysis, gender, type of the salivary gland, T stage, nodal stage N1/2, high grade, LVI, PNI, bone involvement, neck dissection, timing of treatment, and PTV95% have no correlation to locoregional recurrence.

**Conclusion:** Adjuvant RT is a safe method of treatment. Statistically, no effect of some prognostic factors on local control and survival could be determined due to the low number of patients in this study. The place of adjuvant chemotherapy should be defined by prospective studies since the rate of distant metastasis is high. The recommended dose constraints for regional organ at risk can be achieved. Our experience demonstrates excellent long-term locoregional control with low morbidity after adjuvant radiation for patients with high risk features like inadequate surgical margins, recurrent disease, high grade and advance stage.

**Key words:** Salivary gland tumors, Locoregional control, radiotherapy.

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Thesis Title	Diagnostic Value of IL-39 and IL-40 in Iraqi Patients with Rheumatoid Arthritis			
Year	2022		CD: 1580	
Abstract	<p>Firstly, I wish to thank my merciful Allah , who has led me to this fascinating opportunity and inspired the strength, patience and dedication required to accomplish this research.</p> <p>I would also like to thank and share my appreciation for the Dean of the College of Medicine at the University of Baghdad, Assistant Professor Dr. Ameen Abdulhassan Manea AL-Alwany who provided me with the opportunity to perform this study. Likewise, I am deeply thankful to the head of the Department of Microbiology, Assistant Professor Dr. Shatha Farouk Abdullah, for her continued support.</p> <p>I wish to express my sincere gratitude and admiration for my supervisor, Assistant Professor Dr. Inas khalifa Al Sharquie , for her guidance, kindness, advice, and for the lending of her keen scientific mind throughout this study. Also, I would like to express my deepest appreciation to my supervisor Professor Dr. Faiq Isho Gorial for his scientific guidance and support during my work.</p> <p>I wish to further thank all of the members of the Department of Microbiology at the University of Baghdad's College of Medicine for their invaluable feedback and encouragement through the study period.</p> <p>Finally, I'd like to express my thanks to all staff of the Baghdad Teaching Hospital and the Medical Research Unit at the College of</p>			

Medicine, Al-Nahrain University.

## **II**

**Rheumatoid arthritis (RA) is the most common type of inflammatory arthritis, resulting in debilitating pain and stiffness of the joints.**

**Newlyemerging**

**evidence has highlighted the role of B-cell produced cytokines in the development and progression of RA. Specifically, the expression of IL-40 has**

**been shown to be significantly increased in affected patients, with increased**

**levels being observed in the context of heightened disease activity, and reduced**

**levels being observed following B-cell depleting therapy.**

**Recently, a new B-cell secreted cytokine, IL-39, was identified in mice.**

**The most up-to-date research indicates that although IL-39 is expressed in**

**murine models of lupus and has a role in mediating the inflammatory response**

**in this context, there is no solid, replicated evidence of the presence of IL-39 in**

**humans.**

**Objectives:**

**The study aimed to clarify the presence and role of (IL-39) and (IL-40) in**

**the human body and to elucidate whether they play a role in RA.**

**Patients and methods:**

**Blood samples were collected from 66 patients with RA (55 females, 11 males) and 66 healthy controls (47 females, 19 males) attending the Baghdad**

**Teaching Hospital Rheumatology Unit. IL-39 and IL-40 serum levels were**

**assessed using an enzyme-linked immunosorbent assay. C-reactive protein,**

**rheumatoid factor, erythrocyte sedimentation rate, Hemoglobin, white blood cell**

**count, and anti-cyclic citrullinated peptide antibodies were also assessed for**

**these patients.**

## **III**

**Results:**

**The results showed that mean ages of patients with RA were  $46.48 \pm 10.17$  years, and for healthy controls  $44.97 \pm 11.65$  years. The results revealed**

**that serum IL-39 levels were significantly lower in patients with RA ( $p = 0.016$ )**

**( $4.95 \pm 1.10$ ) compared to healthy controls ( $5.55 \pm 1.76$ ). The**

corresponding sensitivity of IL-39 was 56.1% and the specificity was determined as 60.6% at cutoff values of  $\leq 4.99$  ng/mL.

The mean study revealed statistically significant differences ( $p = 0.00$ ,  $p < 0.01$ ) for IL-40, which was found to be higher in patients with RA ( $9.06 \pm 1.301$  ng/ml) than in healthy controls ( $7.51 \pm 2.171$ ). The corresponding sensitivity of IL-40 was 74.2% and the specificity was determined as 66.7% at cutoff values of  $\geq 8.2$  ng/mL.

**Conclusion:**

IL-39 is found in humans but is downregulated in patients with RA. This suggests that either IL-39 can have both pro- or anti-inflammatory functions based on the underlying disease; or that the role of IL-39 is masked by the effects of treatment.

The result also indicate the potential role of IL-40 as a diagnostic tool, based on the increased levels of this cytokine in the serum of patients with RA.

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<b>Thesis Title</b>	<b>ESTIMATION OF ADROPIN ,IRISIN ,AND BIOCHEMICAL MARKERS IN SAMPLE OF IRAQI PATIENTS WITH TYPE TWO DIABETES MWLLITUS</b>			
<b>Year</b>	<b>2022</b>		<b>CD: 1581</b>	
<b>Abstract</b>	<p>Type 2 diabetes mellitus (T2DM) is a multifactorial disease involving genetic and environmental factors. Increased body mass index (BMI) and high levels of lipids are known risk factors for insulin resistance and then the development of T2DM. Irisin and adropin are highly conserved polypeptides that have critical roles in metabolism, energy homeostasis, insulin resistance, and fat regulation.</p> <p>This study aimed to evaluate irisin and adropin in patients with T2DM and their correlation with BMI, lipid profile, and insulin resistance.</p> <p>This is a case-control study than included 90 patients with T2DM and 90 other age- and gender-matched apparently healthy subjects as a control group. Turbidimetric inhibition immunoassay was used to measure the glycated hemoglobin (HbA1c) in whole blood. Serum lipid profile and fasting blood sugar (FBS) were measured using spectrophotometry. Serum levels of fasting insulin, irisin, and adropin were determined using an enzyme-linked immunosorbent assay (ELISA) according to the manufacturer's instructions. Insulin resistance was determined according to the homeostasis model assessment-estimated insulin resistance (HOMA-IR). Descriptive and analytical statistics were used to analyze the data. The results show that patients and controls were comparable in age, gender distribution, and BMI with no significant differences (<math>P &gt; 0.05</math>). However, all components of the lipid profile (except high-density lipoprotein (HDL)), FBS, fasting insulin, and HOMA-IR were higher in T2DM patients</p>			

compared with control, with highly significant differences ( $P < 0.001$ ). The mean serum level of irisin and adipon in T2DM patients was  $5.8 \pm 1.2$  ng/ml and  $139.8 \pm 19.9$  ng/L, respectively, which was lower than that of healthy subjects ( $6.9 \pm 1.3$  ng/ml and  $149 \pm 16.9$  ng/L, respectively) with highly significant differences ( $P < 0.001$ ). According to the receiver operating characteristic (ROC) curve, the cut-off point of irisin in detecting T2DM was  $< 6.95$  ng/ml. According to this cut-off point, the sensitivity and specificity were 83.3% and 51.1%, respectively. Likewise, the cut-off point of the adipon was 147.8 ng/L with a sensitivity and specificity of 80% and 50%, respectively. Both irisin and adipon demonstrated a significant negative correlation with BMI, FBS, HbA1c, and HOMA-IR ( $P < 0.001$ ). Regarding lipid profile, irisin and adipon negatively correlated with triglycerides and low-density lipoprotein. In conclusion, the results established that Serum levels of irisin and adipon were significantly reduced in patients with type two diabetes Mellitus compared with a healthy subject. Irisin and adipon have poor specificity in the context of discrimination between T2DM and healthy subjects. Both irisin and adipon levels have a negative correlation with body mass index. Increased serum levels of irisin and adipon are associated with enhancing insulin sensitivity. Therefore, patients with T2DM are encouraged to practice regulation of physical activity to control their FBS, HbA1C, and insulin. Furthermore, healthy subjects should also have regular physical activity in order to avoid the development of insulin resistance. Irisin and adipon could have therapeutical applications for a patient with T2DM, especially those with high BMI.

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Thesis Title	Effect Of X-Ray With Amygdalin Plant Extract As A Replacement Therapy On Breast Cancer Cell Line <i>In Vitro</i>			
Year	2022		CD: 1582	
Abstract	<p>Cancer is a complex and diverse condition. It is a disease that affects the genome of cells due to Deoxyribonucleic acid (DNA) mutations that turn on oncogenes and tumor suppressors stop working, it has the ability to invade or spread to other body tissues that causes a range of disorders, it the moment, cancer is one of the most prevalent diseases and an issue Important public health around the world, according to the latest World Health Organization (WHO) reports.</p> <p>The medical treatments most commonly used to treat cancer include radiotherapy, surgery, and chemotherapy, as well as a number of techniques often combined to have a synergistic effect, including the use of natural plant extracts such as amygdalin.</p> <p>This study was conducted at University of Malaya / Faculty of Medicine / Department of Pharmacy, Malaysia - Kuala Lumpur, where two cell lines were used, the first was Michigan Cancer Foundation (MCF7) carcinoma cell line and the second was on normal cell line (The human hepatocyte WRL cell line) WRL-68, and this study took from (10/12/2021) to (3/25/2022).</p> <p>This study aims to investigate the effect of X-ray energy (6 Mev) accelerator (LINAC) with amygdalin extracted from local apricot kernels (100 µg/ml) and doxorubicin (20 µL) which is currently used as a cancer treatment product on the cancer cell line. Comparison of MCF7 with normal cells WRL-68, and the possibility of using amygdalin in X-ray instead of doxorubicin for the treatment of breast cancer, and more clearly the study included four main axes: II</p> <p>The first axis: exposing the MCF-7 cell line and the normal cell line WRL-68 individually with X-ray and treating them with amygdalin and doxorubicin and each effect separately and reading the effects after</p>			

examining cytotoxicity by methyl thiazol tetrazolium (MTT) after 24 hours of exposure and treatment, as well as reading other effects in other dishes after 48 hours.

The effectiveness of X-ray on MCF-7 cells for three doses (1, 3, 5) Gy was (24.63, 33.64, 47.32%), as well as amygdalin (34.86%) and doxorubicin (47.8%), while the effectiveness of X-ray on WRL-68 cells for doses (1, 3, 5) Gy are (24.55, 32.89, 47.65%), amygdalin (7.41%) and doxorubicin (24.27 %) for a 24-hour exposure period.

And it showed the effectiveness of X-ray on MCF-7 cells for three doses (1, 3, and 5) Gy, which are (29.21, 37.6, 52.18%), as well as amygdalin (39.39%) and doxorubicin (51.91%), while the effectiveness of X-ray on WRL cells was -68 doses (1, 3, 5) Gy are (28.3, 35.42, 51.45%), amygdalin (11.63%) and doxorubicin (26.74%) for a 48-hour exposure period.

The second axis: exposing MCF-7 and WRL-68 cells to X-ray with amygdalin and X-ray with doxorubicin synergistically at the same time and reading the effects after cytotoxicity examination by (MTT) after 24 hours of exposure and treatments.

The effectiveness of X-ray exposure with amygdalin on MCF-7 cells for three doses reached (1, 3, 5) Gy with a percentage of (48.11, 54.06, 59.9%), and the effectiveness of X-ray exposure with doxorubicin was (50.39, 60.69, 65.86%), respectively. III

While the effectiveness of X-ray on WRL-68 cells at doses (1, 3, 5) Gy was (30.41, 47.48, 54.85%) and the effectiveness of X-ray exposure with doxorubicin was (31.76, 40.01, 56.39%), respectively.

The third axis: exposing MCF-7 and WRL-68 cells to X-ray for 24 hours, then the cells were treated with amygdalin and doxorubicin individually and synergistically and read after 48 hours.

The effectiveness of X-ray exposure with amygdalin on MCF-7 cells for three doses was (1, 3, 5) Gy with a percentage of (52.43, 58.26, 62.2%), and the effectiveness of X-ray exposure with doxorubicin was (54.17, 63.1, 69.64%), respectively.

While the effectiveness of X-ray on WRL-68 cells at doses (1, 3, 5) Gy was (34.71, 52.44, 58.92%) and the effectiveness of X-ray exposure with doxorubicin was (35.46, 43.77, 61.21%), respectively.

Fourth axis: exposing MCF-7 and WRL-68 cells to amygdalin and doxorubicin for 24 hours, then the cells were treated with X-ray individually and synergistically and read after 48 hours.

The effectiveness of amygdalin treatment with X-ray for three doses (1, 3, 5) Gy on MCF-7 cells was (57.12, 56.05, 60.38%), and the effectiveness of doxorubicin treatment with X-ray was (58.89, 67.57, 74.79%), respectively.

While the effectiveness of amygdalin treatment with X-ray for three doses (1, 3, 5) Gy on WRL-68 cells was (39.78, 61.07, 63.52%) and the effectiveness of doxorubicin treatment with x-ray was (41.34, 47.78, 64.58%), respectively.



	<p>In addition to the above, the study found that the effectiveness of x-ray, amygdalin and doxorubicin varied with different inhibition rates according to IV</p> <p>the type of cell line and X-ray doses alone and synergistic with amygdalin and doxorubicin, more clearly, it was found that the doses of X-ray, amygdalin and doxorubicin had significant and high inhibition activity on MCF-7 cells compared to WRL-68 cells.</p> <p>Through the results of the MTT test, it was found that the best treatments as the most effective on MCF-7 cells were when amygdalin was treated with X-ray at a dose (3 and 5) Gy, as it was noted that there were no significant differences between them and the results of doxorubicin treatment with X-ray at a dose (3 and 5) Gy.</p> <p>our conclusion of this that amygdalin with X-ray is a successful alternative as a promising treatment instead of doxorubicin with X-ray, as it showed a significant effect on the viability of breast cancer cells and did not affect healthy cells with X-ray.</p>
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Thesis Title	Role of Immune Checkpoint Biomarkers Among Chronic Hepatitis C Virus Patients On Hemodialysis			
Year	2022		CD: 1583	
Abstract	<p>Hepatitis C virus (HCV) is a viral infection causes liver inflammation. It represents an important global public health problem. Hemodialysis sustains life for more than millions of people worldwide when most of patients with chronic kidney disease (CKD) would die within a few weeks. Immune checkpoints are regulators of the immune system. These pathways are crucial for self-tolerance, preventing the immune system from attacking cells indiscriminately. Therefore, an immune response is tightly regulated, and multiple mechanisms are in place to prevent autoimmune reactions to self-proteins.</p> <p>The present case-control study was carried out to investigate the prognostic value of three immune checkpoint biomarker (Cytotoxic T-lymphocyte-associated antigen 4, Programmed death-1 and Programmed death-ligand-1 immune checkpoints) in chronic kidney disease patients on hemodialysis with/without hepatitis C virus infection, in addition to determine any correlation between the demographic/clinical parameters of the participants.</p> <p>To achieve this goal, blood samples were withdrawn from (120) Iraqi patients attending the Iraqi center of hemodialysis at Baghdad teaching hospital for regular dialysis. The participants were divided into three groups: the first group involves (40) patients infected with Hepatitis CVirus with no antiviral treatment, number of males was (22) and females (18). Ages ranged from (19-68) years. The second group includes (40) patients infected with Hepatitis CVirus with previous/recent antiviral treatment; number of males was equal to females (20). Ages ranged from (24-69) years. The third group, however, consist from (40) patients not infected with Hepatitis</p>			

CVirus(Hepatitis C Virus negative); number of males was (22) and females (18). Ages ranged from (22-65) years. Blood sample were collected during the period from the 3rd of October 2021 to the end of December 2021. Data were collected from the participants through II direct interview by the using of special questionnaire designed for this work, and serum samples that were collected were applied in an Enzyme Linked Immunosorbent Assay detection method for the measurement of the above mentioned immune checkpoint biomarkers. Data analysis revealed that the serum levels of the measured immune checkpoint biomarkers were elevated among the participants, and highly statistical significance differences were seen between the serum levels of these biomarkers and being infected with Hepatitis CVirus infection (patientsinfected with Hepatitis CVirus with previous/recent antiviral treatment comparison with patients Hepatitis C Virus infected without antiviral treatment and patients non infected with Hepatitis C Virus on Hemodialysis). Programmed death-1 biomarker increased in patients infected with HCV with previous/recent antiviral treatment (mean 54.43Pg/mL)more than patients infected with HCV without antiviral treatment and patients not infected with Hepatitis C Virus (mean 39.10Pg/ml and 30.73Pg/mL), respectively.Programmed death-ligand-1 elevated in patients infected with Hepatitis CVirus with previous/recent antiviral treatment (mean 178.57Pg/mL) compare with patients infected with Hepatitis C Virus without antiviral treatment (mean 132.83Pg/mL) and patients not infected with Hepatitis C virus (mean 92.03Pg/mL).Cytotoxic T-lymphocyte-associated antigen 4 elevated in in patients infected with Hepatitis CVirus with previous/recent antiviral treatment (mean 893.83Pg/mL) compare with patients infected with Hepatitis C Virus without antiviral treatment (mean 604.53Pg/mL) and patients not infected with Hepatitis C virus (mean 444.13Pg/mL).

The majority of patients those infected with hepatitis C virus were found to have the chronic phase of the infection, and thus arteriovenousfistula was the most predominant vascular access method. Regarding the biochemical parameters (creatinine, albumin, aspartate aminotransferase, alanine aminotransferase, alkaline phosphatase and total serum III bilirubin, data demonstrated there are high levels of Alanine amino transferase in Hepatitis C Virus infected patients without antiviral treatment compared with Hepatitis C Virus infected patients with treatment and no Hepatitis c virus patients on Hemodialysis.

From the above results we conclude that immune checkpoint biomarkers could affect disease prognosis, further studiesare needed to determine a predictive value for patients infected with Hepatitis C Virus on Hemodialysis.

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Thesis Title	Integrated dosimetry for quality assurance in advanced radiation therapy			
Year	2022		CD:1584	
Abstract	<p>Radiation therapy for cancer now includes several, significantly different techniques. To ensure treatment quality, both in terms of safety and efficacy, each technique requires the use of numerous, customized devices. This thesis considered two such devices, designed at the Centre of Medical Radiation Physics, University of Wollongong, and investigated their applications in scenarios that are particularly challenging in modern x-rays external-beam radiation therapy.</p> <p>The first device was a metal-oxide-semiconductor field-effect transistor (MOSFET) named MOSkin. The MOSkin was first introduced to address the longstanding challenge of measuring radiation dose to the skin of a patient. Other existing sensors were not able to measure accurately in that context, and calculations with a treatment planning system were known to be not adequate. In this thesis, the first step was to look into the MOSkin seeking to optimize its design, so that it could be used to measure dose to the skin of a patient who requires medical imaging with ionizing radiation. Examples of that imaging include image-guided radiation therapy, but also a range of procedures used for diagnostic radiology. The second step was to look into the MOSkin as a device to evaluate a novel bolus. The bolus can be applied on the skin of a patient during x-rays radiation therapy, to provide additional dose build-up and ensure high dose is delivered to the superficial regions.</p> <p>The second device was a two-dimensional monolithic array of silicon diodes named Octa. The Octa was first introduced to address the challenge of measuring two-dimensional dose distribution, with a spatio-temporal resolution commensurate with stereotactic x-rays radiation therapy. Stereotactic treatments deliver radiation beams in arcs around the patient so, in this thesis, the first step was to look into the sensitivity of the Octa changes as a function of radiation's angle</p>			

of incidence. This investigation was also necessary to prepare for the second step, which looked into the Octa as a quality assurance device in the specific case of stereotactic body radiation therapy for vertebral metastases. The Octa was considered a good candidate to map the two-dimensional distribution of radiation dose across the vertebrae, and surrounding organs at risk such as the spinal cord, demonstrating steep dose gradients were delivered to the patient as prescribed.

The present thesis demonstrated that (1) the MOSkin design can be optimized for measuring dose to the skin of a patient who requires medical imaging that use ionizing radiation and that (2) the MOSkin can be used to evaluate the suitability of novel bolus for clinical use. Design optimization was achieved using sensitive volumes of a different thickness. The present thesis also demonstrated that (3) the Octa sensitivity to radiation is angularly dependent, but that this dependence can be characterized and accounted for, and that (4) the Octa can be considered as a good candidate to ensure the quality of stereotactic body radiation therapy for vertebral metastases.

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Thesis Title	Evaluation of serum podocalyxin as a potential biomarker for atherosclerosis in women with polycystic ovary syndrome			
Year	2022		CD: 1585	
Abstract	<p><b>ackground:</b> polycystic ovary syndrome (PCOS) is the commonest endocrine disorder in women of childbearing age. Insulin resistance (IR) has an essential role in the pathophysiology of PCOS and is linked with enlarged risk of metabolic disorders including type 2 diabetes mellitus (T2DM), nonalcoholic fatty liver disease, and cardiovascular disease (CVD). Women with PCOS have a higher chance of developing complications such as obesity, hypertension, and dyslipidemia. Dyslipidemia is the commonest metabolic disorder in PCOS patients and it is a main cause of atherosclerosis which is a lipid-deposition and chronic inflammatory disease that starts in endothelial response to injury and ultimately leads to acute cardiovascular events. Podocalyxin (PODXL) is a component of endothelial plasma membranes, it was assumed that PODXL detected in the blood stream was related to vascular injury. Moreover, atherogenic index of plasma (AIP) has been used as a reliable biomarker of dyslipidemia and atherosclerosis and can be used as a diagnostic indicator when the other atherogenic risk parameters appear normal. Aim of the study: predict the risk of atherosclerosis in women with PCOS by measuring serum PODXL level and estimation of atherogenic index of plasma (AIP) as an indicator of dyslipidemia and prediction of cardiovascular disease. This study also aimed to find the correlation between serum PODXL and lipid panel.</p> <p><b>Materials and methods:</b> This case control study included one hundred twenty-four (124) female participants ranging in age from (18 to 38) years were divided into two groups: group 1 included sixty three (63) PCOS-diagnosed individuals, and group 2 included sixty one (61) healthy individuals (as controls) participated in this case-control research. The</p> <p><b>II</b></p>			

participants visited the infertility center and consulting clinic department of Baghdad Teaching Hospital between November 2021 and March 2022. blood Investigations included of lipid profile and serum PODXL for each individual. In addition, lipid ratios and AIP were calculated. Results: The results showed Significant increase in mean value of serum PODXL ( $P=0.000$ ), TG( $P=0.039$ ), TC( $P=0.002$ ), VLDL-C ( $P=0.039$ ), LDL-C ( $P=0.001$ ), AIP ( $P=0.013$ ), Risk ratio of TC/HDL-C ( $P=0.000$ ), and Risk ratio of LDL-C/HDL-C ( $P=0.000$ ), with significant decrease in mean value of HDL-C ( $P=0.000$ ) in PCOS women as compared to healthy controls. In patient group, significant positive correlations between serum PODXL and body mass index(BMI) ( $r=0.395$ ,  $p=0.001$ ), waist circumference (WC) ( $r=0.433$ ,  $p=0.000$ ) and waist to hip ratio (WHR)( $r=0.427$ ,  $p=0.000$ ),in addition to the significant positive correlation between serum PODXL and TG ( $r=0.597$ ,  $P=0.000$ ) and VLDL-C ( $r=0.597$ ,  $P=0.000$ ),however, significant negative correlation between serum PODXL and HDL-C ( $r=-0.498$ ,  $P=0.000$ )were found. Moreover,significant positive correlation between serum PODXL and (AIP) ( $r=0.863$ ,  $P=0.000$ ), Risk Ratio of TC/HDL-C ( $r=0.408$ ,  $P=0.001$ ), and Risk Ratio of LDL-C/HDL-C ( $r=0.391$ ,  $P=0.001$ ) in patients group. conclusion: PCOS women had higher levels of serum podocalyxin, a protein found in the endothelial, which might be a potential marker for prediction of atherosclerosis, also higher levels of atherogenic index of plasma (AIP) was found in PCOS females which considered as a risk marker to assess CVD even when lipid parameters shows normal behavior. Moreover, significant positive correlation between serum podocalyxin and lipid panel was found in PCOS females which reflect the risk of cardiovascular disease and atherosclerosis.

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Thesis Title	Impact of Behçet Disease on Work Productivity in a Sample of Iraqi Patients			
Year	2022		CD: 1586	
Abstract	<p><b>Background:</b> Behçet's disease is a chronic, relapsing, inflammatory vasculopathy of unknown etiology. Work productivity, as a concept and an outcome measure, has been defined in a variety of ways and perspectives, including personal and environmental contextualization, and disease and occupational settings.</p> <p><b>Aim:</b> To evaluate work productivity and daily activity impairment in patients with Behçet's disease.</p> <p><b>Patients and Methods:</b> A case-control study was conducted in the Rheumatology Unit of Baghdad Teaching Hospital from the 1st of november 2021 to the 1st of April 2022. The sample consisted of two groups: the patient group (which consisted of 80 participants who diagnosed with Behçet's disease) and the control group (which consisted of 80 healthy participants). An interview was conducted with the chosen patients and the control group to gather information regarding sociodemographic, clinical, and disease activities. An assessment of the work productivity was done through Work Productivity and Activity Impairment (WPAI), Work Ability Index (WAI), and Work Productivity Survey (WPS).</p> <p><b>Results:</b> The mean value of Absenteeism, Presenteeism and Daily</p>			



	<p>activity impairment were significantly higher in Behcet patients compared to the control group (<math>21.4 \pm 33.2</math> vs 0), (<math>52 \pm 28.1</math> vs <math>12.0 \pm 21.2</math>), and (<math>47.6 \pm 28.1</math> vs <math>8.0 \pm 14.7</math>), respectively, with P-value=0.001 for all). When comparing the level of WAI between the study groups, there was a significant difference (P-value=0.001).</p> <p>Over 50% of the participants in the Behcet patient group had a poor WAI, compared to 81.3% of those in the control group had a good WAI. All the WPS parameters were significantly higher for Behcet patients than in the control group (P-value=0.015 for question 2 and 0.001 for other questions).</p> <p>Conclusion: Behcet's disease significantly impacted the work productivity of the patients.</p>
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Thesis Title	<b>The Role of Spexin , Irisin and Glucose TransporAhmed Abed Kadhemter four ( GLUT4) on Insulin Resistance in male patients with Type2 Diabetes and Pre Diabetes</b>			
Year	2022		CD: 1579	
Abstract	<p>Type 2 diabetes mellitus is a condition require careful and mindful management, as well as pre diabetes is a serum health condition but usually doesn't have any signs or symptom, that insulin resistance is a global problem and the hormones responsible for it are complex net ,adipocyte hormones as spexin ,irisin and insulin may be are indication ,when their that indication is screening, diagnosis or follow – up. That these hormones controlling energy homeostasis and metabolism</p> <p><b>Aim of the study :</b> The aim of this study was to studying the effect of spexin ,irisin and insulin on the insulin resistance as a screening hormones and there possibility of showing predicting the status of insulin resistance .</p> <p><b>Study design :</b> This case control study involved 88 subjects men only ,22</p>			

patients with type 2 diabetes duration period 10 years of diabetes ,22 individual diagnosed pre diabetes ,22 athletic healthy individuals and 22 healthy individual , with age range between (41 – 63 years ). In the study each of BMI ,serum fasting blood glucose ,blood HbA1c %, body fat percent , serum lipid profile ,serum spexin ,serum irisin ,serum insulin ,serum glucose transporter 4 ,Homeostatic model assessment insulin resistance and the quantitative insulin sensitivity check index were measured for all individuals .

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### **Results :**

All groups of studies were matching forget age and BMI by nonsignificant difference (  $p \geq 0.05$  ) among studied groups, the mean and stander deviation value (  $p \leq 0.05$ ,  $164.72 \pm 41.35$  poml/l ) of serum insulin of pre diabetes type2 diabetes showed significance elevation when compared with healthy and healthy athletic groups, the mean value Serum GLUT4 showed significant decrease (  $p\text{-value} \leq 0.05$  ,  $118.92 \pm 29.68$  pg/ml) in diabetes mellitus Type2 patient and serum GLUT4 show significance decrease with(  $p\text{-value} \leq 0.05$  ,  $145.86 \pm 55.97$  pg/ml) in pre diabetic subject . Serum spexin showed significant elevation (  $p \leq 0.05$  ,  $194.81 \pm 51.06$  ng/l) in pre diabetic individual show the highest significant elevation in there fat percentage (  $16.23 \pm 4.11$  % ) . Serum spexin showed significant elevation in DM type 2 patient with (  $p \leq 0.05$ ,  $141.51 \pm 44.58$  ng/l) their fat

percentage showed significant decrease when compared with healthy subject while the lowest serum level of spexin is show by healthy athletic subject (have low fat percentage  $8.22 \pm 3.21$  % ) , Serum irisin show significant elevation with ( $p \leq 0.05$ ,  $208.88 \pm 68.23$  ng/ml) in pre diabetic group, diabetes mellitus type 2 patient have higher significant elevation with ( $p$  –value  $\leq 0.05$ ,  $157.53 \pm 62.32$  ng/ml) Serum high density lipoprotein showed the lowest significance level (  $p$ -value  $\leq 0.05$  ,  $35.51 \pm 3.46$  ng/ml) in diabetes mellitus type 2 patients when compared with other group ,while the athletic healthy individual showed the highest level, Serum spexin show significant in positive association with serum GLUT4 (  $r = 0.656$  ,  $p$ -value  $\leq 0.001$  ).

### **Conclusion :**

Elevation of serum spexin and irisin may be hold a sign of insulin resistance (character by elevation of serum insulin) with obesity in pre diabetic individuals

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<b>Thesis Title</b>	<b>Awareness Among Patients With Behcet Disease in Sample of Iraqi Patients</b>			
<b>Year</b>	<b>2022</b>		<b>CD: 1588</b>	
<b>Abstract</b>	<p>Behçet's disease (BD) is a multisystemic vasculitis with chronic relapsing course and has the ability to affect almost all organ systems. Awareness(knowledge) is a palliative force against the damaging effects of chronic illness, and description of the tendency of patients to bridge a gap between medical explanations and their own understanding of etiology</p> <p><b>Aim of the study:</b></p> <p>The aims of the current study are to assess the level of awareness(knowledge) in sample of Iraqi patients with BD and to evaluate the impact of sociodemographic and clinical characteristics on the awareness(knowledge).</p> <p><b>Patient and method:</b></p> <p>This is a cross sectional study was conducted at the Rheumatology Unit of Baghdad Teaching Hospital in Medical City during the period from november2021 till may 2022. A total of 60 patients with BD diagnosed according to the International Criteria for Bechet's Disease (ICBD)</p>			

(2014). Socio demographic data including name, age, gender, marital status, with different educational level and occupation were taken. Clinical information regarding their disease duration, number of hospitalizations, organ involvement and drug in use were reported. BD information source (internet, doctors, discussion with patients) also recorded. Patients had interviewed and answered a questionnaire which was including general knowledge about BD

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including causes, risk factors and symptoms of disease, knowledge regarding diagnosis, treatment and complications of BD and knowledge about the importance of awareness. The clinical and demographic data analyzed using descriptive statistics.

#### Result:

The total number BD patients involved in this study was 60. The age ranged from (17-63 years) with a mean of  $35.8 \pm 10$  years. Most of them are male 40 (66.7%) with male:female ratio (2:1). More than two third of the patients were married 47 (78.3%). Most of them were employed (53 patients) (88.3%). Two third of them were in the primary and secondary school (42 patients out of 60). Thirty three patients (55%) reported that the duration of their disease was  $>5$  years. thirty four patients (56.6%) reported that there was  $>3$  time hospitalizations. The eye involvement reported as most organ involved in 55 (91.7%). Fifty four patients (90%) get their informations from their doctors, followed by 16 patients (26.7%) get information from the internet and only 2 (3.3%) get information from other patients. Forty eight patients (80%) of the patients accepted the BD is not contagious and 45 (75%) of the patient thought that BD is not fatal. thirty two (53.3%) reported autoinflammatory process as the cause of BD. Fifty one patients (85%) do not know what the genetic test used to assess the tendency to develop BD. Twenty two patients (36.7%) said that male is more affected by the disease. All patients (60 patients) reported that BD can affect any organ in the body. Fifty four patients (90%) had regular visit to the ophthalmologist. Forty one patients (68.3%) agreed that the diagnosis of BD made clinically (clinical criteria). Forty six patients (76.7%) did not know about the complications of BD. Forty one (68.3%) reported BD as treatable disease. All patients agreed that









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awareness (knowledge) about BD should be prompted. The mean knowledge score was  $(19.10 \pm 4.97)$  and ranged from (12-31). The result reveals that most of them (43.3%) (26 patients out of 60) had intermediate knowledge followed by 40% had poor knowledge whereas only (16.7%) had good knowledge. The present study revealed that there was no significant association ( $p > 0.05$ ) between the level of knowledge and age, gender, as do with marital status. There is no significant association between the level of knowledge and number of hospitalizations ( $p$  value = 0.60). The most important significant

association is between the level of knowledge score and educational level ( $p=0.00$ ), between the level of knowledge score and occupation ( $p=0.010$ ), between the level of knowledge score of getting information source from the doctors( $p$  value= $0.001$ ) and finally There is significant association between the score of knowledge and duration of disease ( $p$  value= $0.011$ ).

**Conclusions:**

The current study conclude that Iraqi patients with BD have intermediate level of knowledge. There are no relationship between age of the patients , gender, marital status and number of hospitalizations with level of knowledge. Important and significant relationship between the level of education ,occupation of the patients and duration of disease that the patients had with the level of knowledge. Important relationship between getting information from the doctor and increasing level of knowledge

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<b>Thesis Title</b>	The Pattern of paediatric emergency visits and during the COVID-19 pandemic : A Children Welfare Teaching Hospital Experience			
<b>Year</b>	<b>2022</b>		<b>CD: 1589</b>	
<b>Abstract</b>	<p><b>Background:</b> Since declared a pandemic, COVID-19 has spread rapidly, causing significant suffering worldwide. It caused changes in the patterns of attendance at the emergency department including paediatrics departments indicating that the pandemic was impacting children's healthcare.</p> <p><b>Aim:</b> To identify the impact of COVID-19 on the pattern of visits to the emergency department in the Children Welfare Teaching Hospital, Medical City Complex before and during the COVID-19 pandemic.</p> <p><b>Method:</b> A descriptive cross-sectional study was conducted by reviewing the registries of the emergency department in Children Welfare Teaching Hospital, Baghdad during the period from 1st of March 2019 to 29th of Feb 2020 (before the pandemic) and the period from 1st of March 2020 to 28th of Feb 2021 (during the pandemic).</p> <p><b>Results:</b> There was a 40% decrease in paediatric emergency visits during the first year of the COVID-19 pandemic compared to the same period before the</p>			



pandemic. Ophthalmological and dermatological emergency visits were the most affected during the COVID-19 pandemic, with the highest percent change (83% and 65%, respectively). At the same time, liver disease and urinary tract disease visits were the less affected during the COVID-19 pandemic with the lowest percent change (7% and 12%, respectively). The most affected age group in decline was those <1 and >6 years. The proportion of patients who were discharged home increased after the COVID-19 pandemic.

**Conclusion:** There was a remarkable decline in paediatric emergency department visits during the COVID-19 pandemic. The visits due to less severe conditions were the most affected. Close examination of trends in paediatric ED visits during the

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COVID-19 pandemic should be a priority for health officials. Interventions may be required to ensure that children receive access to timely emergency care when necessary.

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Thesis Title	Association of Different Metformin Doses with Glycemic Control, Body Mass Index, Visceral Adiposity Index, and Inflammatory Markers in Type-2 Diabetic Iraqi Patients			
Year	2022		CD: 1590	
Abstract	<p>Type 2 Diabetes Mellitus (T2DM) is a group of metabolic illnesses caused impaired insulin secretion and/or failure of insulin-sensitive tissues to respond to insulin. Significant intraindividual heterogeneity in response to treatment with metformin may be caused by a number of factors, including age, gender, physical inactivity, insufficient dose, noncompliance, and interactions between drugs. In addition, there is a possibility that people with type 2 diabetes (T2DM) can exhibit considerable fluctuations in their levels of glycemic control, obesity, and cardiovascular risk indicators depending on how well they adhere to their treatment protocols.</p> <p><b>Objectives</b> This study aims to assess the effect of dose up-titration, treatment duration, and adherence to a Metformin-based protocol on glycemic control, serum insulin and leptin levels, adiposity markers, and cardiovascular risk surrogate markers in Iraqi patients with type 2 diabetes.</p> <p><b>Methods</b> Between October 2021 and March 2022, 153 T2DM patients with a</p>			

disease duration of more than one year participated in a cross-sectional study at the Specialized Center for Endocrinology and Diabetes, Al-Rusafa, Baghdad. As part of the study procedure, the patients were clinically and physically examined, and their medical history, demographic information, and medication history were recorded. Their body weight, height, mass index (BMI), and waist and hip circumference were measured. Indicators of the biochemical markers glycated hemoglobin (HbA1c), fasting serum glucose (FSG), insulin, leptin, creatinine, C-reactive protein (CRP) levels, and lipid profile indicators were also assessed. The

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waist-to-hip ratio (WHR), visceral adiposity index (VAI), and other surrogate markers of cardiovascular risk were also determined. The data were evaluated after rearrangement according to metformin doses, treatment duration, glycemic control, and adherence to treatment protocol.

### Results

After data correction for Metformin doses and duration of treatment, FSG, HbA1c, insulin, creatinine, and CRP levels did not differ significantly ( $P > 0.05$ ) across groups taking different doses of Metformin for different durations. According to Pearson's correlation study, there was no association between Metformin doses and treatment duration and glycemic control or insulin levels. After arranging the data according to glycemic control level, only the TC/HDL-c and TG/HDL-c ratios were statistically different. After arranging the data for Metformin doses and treatment duration, none of the adiposity indicators and serum leptin levels were significantly different ( $P > 0.05$ ) between groups receiving different doses of Metformin for different durations, with the exception of VAI, which demonstrates a very slight decrease ( $P = 0.046$ ) after more









than 10 years of treatment. Pearson's correlation analysis revealed a weak and significant relationship between WC and HR and Metformin doses, and a weak and significant relationship between WC, VAI, and TG levels and treatment duration. The other markers did not exhibit a meaningful correlation with Metformin doses or treatment duration. Adherence to therapy had a considerable impact on fasting glycemia, HbA1c levels, and obesity markers. Increasing Metformin doses has no effect on insulin resistance or cardiovascular disease risk indicators.

**Conclusions**

Up-titration of metformin doses and treatment duration were not substantially linked to glycemic control or serum insulin levels in Iraqi patients with type 2 diabetes. Neither were they significantly correlated with adiposity indicators or lipid profiles. Beyond the dosage adjustment of Metformin, treatment adherence has an effect on glycemic control, visceral obesity, and surrogates for the risk of cardiovascular disease. There was no correlation reported between increasing the dose of Metformin and insulin resistance or total body fat content

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<b>Thesis Title</b>	<b>Knowledge, Attitude and Practice of Primary Health Care Physicians in the Management of Type 2 Diabetes Mellitus</b>			
<b>Year</b>	<b>2022</b>		<b>CD: 1541</b>	
<b>Abstract</b>	<p><b>Background:</b> Diabetes Mellitus is found all around the world. Globally, an estimated 537 million adults (20-79 years) have diabetes. It has a negative impact on a variety of health outcomes noted that DM impairs all aspects of health. In recent decades, the care of diabetic patients has transitioned from specialist care to PHC, because physicians working at various PHC institutions are in the first line of treatment, their knowledge, attitude and practice are the determining factor in DM management.</p> <p><b>Objective of the study:</b> To assess the knowledge, attitude and practice of primary health care physicians in the management of type 2 diabetes mellitus and to assess some sociodemographic factors that may affect the knowledge, attitude and practice of the primary health care physicians.</p> <p><b>Methods:</b> A cross-sectional study design was adopted for this study. The study was conducted in twenty primary health care centers from</p>			

	<p><b>Baghdad</b></p> <p><b>Al-Karkh health directorates. The primary health care centers were chosen</b></p> <p><b>by simple random sampling method. A total of 103 participants were involved in the study. Collection of the data was completed within five months (from 1st of April to the 1st of September 2021).</b></p> <p><b>Results: Most of the studied sample were working in urban area 82 (79.6%). Regarding knowledge, sixteen (15.5 %) scored excellent, 35 (34%) scored good, while 29 (28.2) scored satisfactory and 23 (22.3%) scored poor. Regarding attitude, twenty four (23.3%) scored excellent, 30 (29.1%) scored good, while 30 (29.1%) scored satisfactory and 19 (18.4%) scored poor. Regarding practice, eighteen (17.5%) scored excellent, 20 (19.4%) scored good, 21 (20.4%) scored satisfactory and 44 (42.7%) scored poor. A statistically significant association was found between attitude scores and years of experience after graduation (P value = 0.025).</b></p> <p><b>Conclusion: More than half of the sample had excellent and good level of knowledge and attitude. Physicians experience after graduation had significant influence on level of attitude. Sociodemographic characteristic (other than Experience after graduation) did not display any significant influence on the level of knowledge, attitude and practice.</b></p>
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<b>Career</b>	 Assistant Lecturer	 Lecturer	 Assistant Professor	 Professor
	 Master	 PhD	 Diploma	 Board
<b>Thesis Title</b>	<b>Determinants of COVID-19 vaccines acceptance among a sample in Baghdad-Iraq</b>			
<b>Year</b>	<b>2022</b>		<b>CD: 1547</b>	
<b>Abstract</b>	<p>The Coronavirus 2019 (COVID-19) pandemic is a major threat to public health and has had a significant impact on all aspects of life. Vaccine development led to growing optimism regarding control of COVID-19. Vaccine acceptance by the majority of the population is important for the success in controlling COVID-19,</p> <p>The study aimed to explore the COVID- 19 vaccine acceptance in a sample of the general population in Baghdad city.</p> <p><b>Subjects and method:</b></p> <p>Descriptive cross-sectional study conducted for the period starting from 1st of March to the 1st of July 2021.The target population included a sample of adult people in Baghdad city. Individuals were invited by two routes, the first one was through an online technique by a snow ball sampling strategy and the second one</p>			

was by a printed form that was filled through direct interview with people attending Outpatient Clinics in Baghdad Teaching Hospital, Medical City Campus.

**Results:**

In the current study; 1017 participants were enrolled in the study (females = 62.8%). A total of 419 (41.2%) participants were hesitant to take the COVID-19

vaccine and 306 (30.1%) participants were willing to take the COVID-19 vaccine.

It was found that the intent to get COVID-19 vaccine was significantly associated

with age, gender, marital status, education, occupation and being a health care

worker, participants who had information about COVID-19, the source of

information, trusting world health organization , history of previous infection

with COVID-19, believing that the disease is dangerous, believing that vaccination against COVID-19 is important and those who used to take influenza

vaccine .The most frequently reported reasons among the 711 individuals who

**VII**

refused vaccination or were not sure about taking the vaccine were fear of side

effects (54.8%) and not sure of effectiveness (44.4%). it was found that among

the 182 health care providers, 44% responded that they would definitely be

willing to get vaccinated with the provided vaccine, 39.6% were not sure with

respect to getting a vaccination and 16.4% refused to get vaccinated.

**Conclusion:** Participants reported high hesitancy rate. this rate influenced by









sociodemographic and health-related characteristics. Several barriers were









identified, and efforts should be intensified to overcome these barriers.



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Thesis Title	Knowledge, Attitude and Practice of Hand Hygiene among Residents' Doctors in Baquba Teaching Hospital during Covid 19 Pandemic			
Year	2022		CD: 1548	
Abstract	<p>Background: Healthcare providers have been identified as the most common vehicle for transmission of hospital acquired infections (HAIs) from patient to patient and within the healthcare environment...level of adherence and determinants of poor compliance to hand hygiene should be investigated among health care workers.</p> <p>Objectives of the study: This study aimed to assess knowledge, attitude and practice among medical residents at Baquba teaching hospital.</p> <p>Methodology: A descriptive cross sectional study was carried out among residents' doctors at health care unites in Baquba city during the period from first of January to first of July 2021). WHO's Five Moments of Hand Hygiene Questionnaire, was used to collect data. All residents' doctors from different wards were invited to participate in this study (250 in total). A P value &lt; 0.05 was considered statistically significant. The data were analyzed using SPSS, version 17.</p> <p>Results: Of 200 clinical study participants, (66%) were females, 169 (39.8%)</p>			

	<p>were at age group 31-39 years, and 78.5% had &lt;2 year of work. 66% had fair knowledge; 55% had fair attitude and 55%% had fair hand hygiene practices.</p> <p>Hand washing after contact with patient (90%) was better than before contact (34%). However, there were significant association between respondents who had &gt;2 years of work and their knowledge level, while participants who received formal training had better attitude and better practice.</p> <p><b>Conclusions:</b> Training, education and motivation of HCWs in Baquba Teaching Hospital are the best ways to improve the level of knowledge, attitude and practice of hand hygiene.</p>
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Thesis Title	Disparity between International Recommended Skills and Practicing Family Medicine in Iraq			
Year	2022		CD: 1540	
Abstract	<p>FM is relatively a new discipline in many countries. It continues to present a wide spectrum of ground level challenges related to the variations in its scope and the heterogeneity in its practice within different global contexts. Family physician constitutes the fundamental core of the health system globally.</p> <p><b>Methodology:</b> A cross sectional study was conducted. A total of 170 family physicians participated in the study. A special designed form was used to collect data</p> <p>The majority of the participant were female 151 (88.8%), married 139 (81.9%), specialists 98 (57.6%), board (68.7%), working in PHCCs 106 (62.4%), and living in the middle region of Iraq 129 (75.9%). Peak age was 30 – 40 years 119 (70%). Many had theoretical and independent performance skills in managing cardiac and surgical conditions, invasive diagnostic procedure, post operative care, minor surgical techniques, newborn care, well care, acute care, woman's health and gynecologic care, and eyes' conditions skills.</p> <p><b>Conclusions:</b> 1- Shortage in family physicians skills in Iraq than that recommended literatures.</p>			

	2- No obvious demarcation between their role of PHC physicians and the global role of family physicians.			
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	 Master	 PhD	 Diploma	 Board
<b>Thesis Title</b>	<b>Presentation and Some Risk Factors among a sample of Iraqi Patients with Multiple Sclerosis / 2021</b>			
<b>Year</b>	<b>2022</b>		<b>CD: 1536</b>	
<b>Abstract</b>	<p><b>Background:</b> Multiple sclerosis is a chronic inflammatory disease of the central nervous system. The wide variety of clinical manifestations, risk factors, extent and anatomical sites of the involvement are varied among patients world wide.</p> <p><b>Study objectives:</b> To identify the sociodemographic characteristic, risk factors and clinical types of multiple sclerosis among patients attending Dr. Saad Al-Witry hospital for neurosciences in Baghdad/Iraq.</p> <p><b>Methodology:</b> A cross sectional study was carried out at a specialized multiple sclerosis clinic in Baghdad/Iraq during the period from April to October, 2021.</p> <p>All of the patients who attended the clinic/hospital during the time of the study were included. Data, that were collected by direct interview with each patient, included sociodemographic characteristics, clinical types and presentation of MS, and risk factors.</p> <p><b>Results:</b> The study involved 220 MS patients, The mean age was 37.10 with SD 8.232 years with female to male ratio 1.72:1, 78% of them were</p>			

	<p>diagnosed at age 20 to 39 years. 61.4% of patients presented at summer season, Relapsing remitting pattern of the disease was found among 147 (66.8%) patients with visual symptoms at disease onset in 50.9% of them. Vitamin D deficiency, parental consanguinity and history of animal exposure (68.6%, 50.9%, and 44.5%) were the main risk factors with significant relationship with clinical pattern, age and gender.</p> <p><b>Conclusions:</b> Relapsing remitting pattern of the disease was the major pattern among the Iraqi MS patients. Vitamin D deficiency, parental consanguinity and history of animal exposure were the major risk factors with significant relationship with age and gender</p>
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	<input type="radio"/> Master	<input type="radio"/> PhD	<input checked="" type="radio"/> Diploma	<input type="radio"/> Board
Thesis Title	Functional Status and Long Term Consequences of Post COVID-19 in a Sample of Iraqi Patients from Baghdad 2021			
Year	2022		CD: 1542	
Abstract	<p>Background: The battle against COVID-19 does not end with diagnosis and management of acute disease. The long-term health consequences experienced by survivors of COVID-19 called —Post-COVID Syndromel. With increasing number of subjects are recovering from COVID-19, raising the need for tools to adequately assess the course of the disease and its impact on functional status.</p> <p>—Post-COVID-19 Functional Status scalel is recommended.</p> <p>Aim of the Study: Assess post COVID functional status of patients and Measure the rate, type of long term consequences of patients and study the relation of socio-demographic, disease characteristics, and the persistent consequences with their score in the post-COVID-19FunctionalStatus scale.</p> <p>Method: Descriptive Cross-sectional study with analytic element collected from three hospitals.</p> <p>Result: The present study involved 300 patients, 50 (16.7%) of them died after discharge. Their mean±SD age was 58.6 ±16.2 years. Only one fifth of the patients survived after discharge did not reported long term complaints. While the most reported complaint was muscle weakness. One third of participants</p>			

	<p>were had grade 0. There was significant association between gender (female) and smoking (none) with development of complaints and between elderly, married, urban residency, and need for O2 with higher grade of post-COVID-19 Functional Status scale. Presence of complaints were associated significantly with higher grade of post-COVID-19 Functional Status scale.</p> <p>Conclusion: Most of the COVID-19 recovered cases have diverse degrees of functional restrictions ranging from negligible to severe based on post-COVID-19 Functional Status scale. These restrictions were affected by presence of complaints, age, marital state, urban residency, need for oxygen or IUC admittance, and lastly the presence of coexisting comorbidity.</p>
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<b>University of Baghdad</b>				
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<b>Career</b>	<input type="radio"/> Assistant Lecturer	<input type="radio"/> Lecturer	<input type="radio"/> Assistant Professor	<input type="radio"/> Professor
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<b>Thesis Title</b>	<b>Perception of Sample of Iraqi Mothers Regarding Delay of Routine Infants Immunization During COVID-19 Pandemic 2021</b>			
<b>Year</b>	<b>2022</b>		<b>CD: 1539</b>	
<b>Abstract</b>	<p><b>Background:</b> Basic vaccinations are essential for child well-being and delaying these routine vaccines during Corona virus disease-19 pandemic will lead to vaccine-preventable diseases outbreaks.</p> <p><b>Objectives of the Study:</b></p> <ol style="list-style-type: none"> <li>1. To measure the rate and mean duration of delay in the routine immunization of one year of age infants during Corona virus disease-19 pandemic.</li> <li>2. To identify reasons related to Corona virus disease-19 on delaying immunization schedule for these infants.</li> <li>3. To explore mothers' views and opinions of accessing immunization services in primary health centers during the pandemic.</li> </ol> <p><b>Methods:</b> A descriptive cross-sectional study was conducted from March to August 2021 in different governorates of Iraq through online interviews through different social media applications. Data were acquired from participants who take care of a child aged from 12–24 months live permanently in Iraq. The questionnaire was structured to collect demographic data, Current immunization status, possible reasons related to Corona virus disease–19 that prevented caregiver from vaccinating their child, and perception and attitude toward immunization delay through a standardized 7 questions with 3- Likert</p>			



scale.

**Results:** A total of 255 were included in the study, only 2% of the participants

were up-to-date with the national vaccination schedule, while about 98% of

them were not. Duration of delay was ranging from no delay to >45 day. The

most frequent duration of delay was from 30-45 days. The main three causes of

delaying vaccination date were fear of getting Corona virus disease-19 infection

from Primary Health Care centers (64%), fear of getting Corona virus disease-

19 because the Primary Health Care center was overcrowded (60.4%), and the

total national lockdown (54%).

**Conclusion:** Corona virus disease-19 pandemic affects the routine

immunizations in Iraq and additional measures are needed to improve the

quality of care offered.

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	<input type="radio"/> Master	<input type="radio"/> PhD	<input type="radio"/> Diploma	<input checked="" type="radio"/> Board
Thesis Title	Prevalence Of Migraine Headache Among A sample Of Family Physicians In 2021			
Year	2022		CD: 1538	
Abstract	<p>Background: Headache disorder is one of the most everyday complaint in medical practice, classified to primary and secondary, migraine is one of the most common type of primary headache.</p> <p>Objectives of study: Identify the prevalence of migraine headaches among family medicine physician, identify the risk factors of the migraine and Identify the associations between the trigger factors and migraine.</p> <p>Methods: A cross-sectional online study was conducted on a convenient online sample of 500 family physicians in a Facebook famous group for family physicians for a period of four months from July to October during 2021.</p> <p>Results: The study revealed that the prevalence of suspicion migraine was (17.4%) among the participants. There was a significant association between the age of the participants and the suspicion of migraine, as that the young participants was associated with the suspicion of migraine more than the old age participants. There was a significant association between participants with a family history of migraine, participants that have headache diagnosed as migraine and participants who take medication and the suspicions of migraine. Triggers factors (diet, skipped meal, stress and sleep deprivation) were found to be statistically significantly associated with the suspicions of</p>			

	<p>migraine participants.</p> <p><b>Conclusion:</b> The study reveals that the prevalence of suspicion migraine in family physicians was 17.4. Light or noise bothering is the most common associated symptom with the suspicions of migraine participants. Triggers factors (diet, skipped meal, stress and sleep deprivation) were found to be affect the migraine participants.</p>
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Department	Clinical Biochemistry			
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Career	<input checked="" type="radio"/> Assistant Lecturer	<input type="radio"/> Lecturer	<input type="radio"/> Assistant Professor	<input type="radio"/> Professor
	<input checked="" type="radio"/> Master	<input type="radio"/> PhD	<input type="radio"/> Diploma	<input type="radio"/> Board
Thesis Title	STUDYING OF BIOCHEMICAL MARKERS VASCULAR CELL ADHESION MOLECULE -1 (VCAM-1) AND INTRACELLULAR ADHESION MOLECULE -1 (ICAM-1) IN COMPARING WITH ATHEROGENIC INDEXES RATIOS AS RISK FACTORS FOR ATHEROSCLEROSIS IN PATIENTS WITH 91SYSTEMIC LUPUS ERYTHMATOSUS			
Year	2022		CD: 1591	
Abstract	<p><b>Background:</b> Systemic Lupus Erythematosus (SLE) is the prototype systemic autoimmune disease that can affect any organ. Atherosclerosis is an inflammatory process that involves increased expression of cellular adhesion molecules and enhanced cell migration, lowdensity lipoprotein (LDL) recruitment and fibrous tissue proliferation that lead to partial or total blood flow obstruction. Adhesion molecules, such as intercellular adhesion molecule-1 (ICAM-1) and vascular cell adhesion molecule-1 (VCAM-1) together these molecules form an integrated and overlapping system for the transport of leukocytes into the vascular wall and play an active role in the development of atherosclerotic plaques.</p> <p><b>Objective:</b> The aim of this study to investigate a possible relationship between circulating VCAM-1 and ICAM-1 as risk markers for atherosclerosis in Iraqi patients suffered from Systemic Lupus Erythematosus (SLE) and their relationship to cardiovascular risk.</p> <p><b>Subjects, material and method:</b> This case control study included 100</p>			

systemic lupus erythomatosus (SLE) patients and 50 apparently healthy controls, all of them without history of CVD. All patients at the unit of Rheumatology, Baghdad Hospital / Medical City, who fulfilled four or more of the 2019 revised American College of Rheumatology Criteria for classification of SLE. Their clinical disease activity was assessed by the SLE disease activity index 2000 (SLEDAI-2K). Two classifications of SLE patients were made the first time they were classified into 1. Active group (SLEDAI $\geq$ 10) n = 60, 2. Inactive group (SLEDAI < 10) n = 40 and healthy controls n= 50 (43 female, 7male) their age between (14-52) year.

#### *Abstract*

#### **III**

The second time they were classified into 1. Mild (SLEDAI 5-9) n = 40, 2.

Moderate (SLEDAI 10-14) n = 30, 3. Sever (SLEDAI  $\geq$  10) n = 30, and healthy controls n = 50. The measurements parameters were: (1) - VCAM-1, ICAM-1 and

VCAM-1/ICAM-1 ratio. (2) - T.C, T.G, LDL-C, HDL, VLDL, TC/HDL, LDL/HDL ratios and CRP.

Results: The Mean $\pm$ (S.D) of VCAM-1 was (87.59 $\pm$ 19.89) in healthy control

and (223.83 $\pm$ 9) in SLE patients P value <0.0001. Mean $\pm$ S.D of ICAM-1 was

(1.806 $\pm$ 0.218) in healthy control and (2.67 $\pm$ 0.08) in SLE patients P value <0.0001.

Mean $\pm$ S.D of VCAM-1/ ICAM-1 was (48.76 $\pm$ 11.09) in healthy control and

(84.6 $\pm$ 3.09) in SLE patients P value <0.0001. . sVCAM-1, sICAM-1 levels and

VCAM-1/ICAM-1 ratio were increased significantly and gradually with increasing

of the severity of the disease in patients groups compared with control. Serum TC,

HDL and LDL levels significantly reduced in the SLE patients compared to

control, while the TC/HDL and LDL/HDL ratios were significantly elevated with

the severity of the SLE disease. the Mean  $\pm$  S.D of Total cholesterol was

(206.04 ± 35.5) in healthy control and (161 ± 4.34) in SLE patients P. value < 0.0001. Mean ± S.D of Triglyceride was (155.75 ± 48.14) in healthy control and (110 ± 4.81) in SLE patients P. value 0.300. Mean ± S.D of VLDL was (30.62 ± 9.12) in healthy control and (21.95 ± 0.76) in SLE patients P value < 0.0001. Mean ± S.D of HDL was (50.45 ± 9.12) in healthy control and (32.16 ± 1.42) in SLE patients P. value < 0.0001. The Mean ± S.D of LDL was (125.75±38.14) in healthy control and (106.54 ± 3.71) in SLE patients P value 0.002. Mean ± S.D of TC/HDL was (4.12 ± 0.8) in healthy control and (5.44 ± 0.21) in SLE patients P. value < 0.0001. Mean ± S.D of LDL / HDL was (2.5 ± 0.76) in healthy control and (3.67 ± 0.18) in SLE patients P. value 0.0001.

*Abstract*

**IV**

The results were supported by measurements of mean±SD, P value and ROC analysis.

**Conclusion** the significantly high level of VCAM-1, ICAM-1 and VCAM-1/ICAM-1 in serum of SLE patients in conjugation with the significantly high level of atherogenic index (TC/HDL, LDL/HDL) ratios as well as CRP all of patients with SLE to the risk of atherosclerosis and CVD.

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Thesis Title	Diagnostic and Prognostic Values of Serum (Tripartite Motif- Containing Protein 72, 15-Isoprostane F2t and Soluble Triggering Receptor Expressed on Myeloid Cell-1) in a Sample of Iraqi Patients with Rheumatoid Arthritis			
Year	2022		CD: 1592	
Abstract	<p>rheumatoid arthritis (RA) is the most common inflammatory arthritis affecting 0.5 – 1% of general population worldwide. Rheumatoid arthritis is one of the most important chronic immune mediated inflammatory disease that contribute to the deterioration of joints and musculoskeletal systems.</p> <p><b>Objectives:</b> Investigate the serum levels of Tripartite motif-containing protein 72, 15-Isoprostane F2t and soluble triggering receptor expressed on myeloid cells - 1 in Iraqi patients with rheumatoid arthritis and healthy controls.</p> <p><b>Methods:</b> This case control study was carried out at Baghdad Teaching Hospital/ Medical City and Biochemistry Department, College of Medicine, University of Baghdad, Baghdad, Iraq, during the period from December, 2020 till the end of June 2021. It included 117 Iraqi patients with rheumatoid arthritis and 58 apparently healthy subjects as control. The patients were encountered during their attendance the Rheumatology consultation clinic at Baghdad Teaching hospital and diagnosed to have RA by Consultant Rheumatologist and included in this study when they were fulfilling the criteria of American college of Rheumatology (ACR) for RA diagnosis. The subjects in this study were divided into three main</p>			

groups: Group 1: Sixty-two RA patient with active disease. Group 2: Fiftyfive

RA patient with inactive disease. Group 3: fifty-eight Apparently healthy served as control.

The following biochemical markers were measured quantitatively by using enzyme linked immunosorbent assay (ELISA) technique: Tripartite

motif-containing protein 72, soluble triggering receptor expressed on myeloid cells - 1 and 15-Isoprostane F2t. while calcium, magnesium and

inorganic phosphorus by chemistry analyzer.

Results:

female in Inactive RA group 41 (74.54%), male 14 (25.45%), in active RA

group female was 49 (79.03%), male 13 (20.96%) and for controls female

III

40 (68.96%), male 18 (31.03%) there was non- significant differences between the studied groups.

Serum levels of Tripartite motif-containing protein 72 (Pg\ml) were significant higher in active RA disease Groups (101.92±160.18) as compared with Inactive RA disease Groups (64.58±54.34) and control

Groups (41.06 ±32.48) (P <0.005). Serum levels of soluble triggering

receptor expressed on myeloid cells - 1 (Pg\ml) of active RA patients (270.17±187) were found to be significantly higher than Inactive RA

patients (112.81±37.48) and healthy controls (43.89±29.53) (P <0.001).

mean values of 15-Isoprostane F2t (Pg\ml) found significant increase in inactive RA disease Groups (272.24±207.41) as compared with Inactive RA disease Groups (198.53±80.96) and control Groups (68.66±50.45) (P <0.001). means of serum levels Calcium and an inorganic phosphorus

revealed that their significant correlation between studied groups (P <

0.001). While magnesium no significant correlation between studied groups. Tripartite motif-containing protein 72 had poor ability to

discriminate between RA and control (since its AUC ≥0.689), soluble

triggering receptor expressed on myeloid cells - 1 had an excellent ability

to discriminate between RA and control (since its AUC ≥0.936). 15-

Isoprostane F2t had a good discriminating power in such differentiation

between RA and control (since its AUC ≥0.866).

Abstract



#### **IV**

##### **Conclusion:**

**There is a positive relationship between DAS-28ESR and soluble triggering receptor expressed on myeloid cells - 1, 15-Isoprostane F2t and**

**Tripartite motif-containing protein 72 levels. Serum levels of soluble triggering receptor expressed on myeloid cells - 1, 15-Isoprostane F2t were**

**significantly higher in active RA compared to Inactive RA, while Tripartite**

**motif-containing protein 72 was not significantly different between active**









**RA and Inactive RA. soluble triggering receptor expressed on myeloid cells - 1 had an excellent ability for discrimination between rheumatoid arthritis patients and control. Poor discriminative value of Tripartite motif-containing**

**protein 72 in differentiation between rheumatoid arthritis**

**patients and control and 15-Isoprostane F2t had a good discriminating power in such differentiation between RA and control**

#### **V**

##### **Lists**

University of Baghdad				
College Name	College of medicine			
Department	Echocardiograph			
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Thesis Title	THE CORONARY SINUS ECHOCARDIOGRAPHIC FINDINGS IN PATIENTS WITH HEART FAILURE: PREDICTORS AND OUTCOMES			
Year	2022		CD: 1596	
Abstract	<p><b>Background:</b> The coronary sinus is the blood conduit in the continuation of the great cardiac vein situated between the valve of Great Cardiac Vein of Vieussens or the point of entrance of the Oblique Vein of Left Atrium and the Thebesian Valve of the ostium of the coronary sinus. It is about 2-3 cm in length, situated in the posterior part of the coronary sulcus of the heart, usually covered by muscular fibers from the Left Atrium. Mean diameter of coronary sinus 7.05 mm <math>\pm</math> 1.90, coronary sinus dilatation is established when the diameter is &gt; 11 mm .</p> <p><b>Aim of study:</b> To determine the relatives between LVEF and coronary sinus diameter and study the clinical and echocardiographic predictors of coronary sinus dilatation .</p> <p><b>Method:</b> we conducted a cross-sectional study during 7months period. It included patients with heart failure . CS diameter was compared between ejection fraction in three groups( HFrEF, HFmrEF and HFpEF). Other variables assessed during this study included age, sex, diabetes ,hypertension .</p> <p><b>Results:</b> This study included a total of 50 patients. The mean age was (31.725 <math>\pm</math> 6.21) years. There was a significant association between the mean and standard deviation of coronary sinus diameter in patients</p>			









who had heart failure with reduce ejection fraction as the p-value was less than 0.05. The ROC analysis shows that the cut-off value of the coronary sinus diameter for the prediction of heart failure patients with reduced ejection fraction was 8.350 mm, with a sensitivity of 92.6%, and specificity of 82.6%.According to the logistic regression analyses for the prediction of compromised Coronary sinus diameter values showed that DM , EF , LVESD , RV diameter , IVC Diameter , TAPSE and PASP were independently associated with coronary sinus dilatation among HFrEF patients.

**Conclusion:** The CS diameter was increased in patients with HFrEF ,We shows that 8.350 mm may be the optimal cutoff value for differentiated normal from abnormal CS diameter in heart failure . DM , EF , LVESD , RV diameter , IVC Diameter , TAPSE , peak TR pressure and PASP were independently associated with coronary sinus diameter among HFrEF patients.

<b>University of Baghdad</b>				
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	<input type="radio"/> Master	<input type="radio"/> PhD	<input checked="" type="radio"/> Diploma	<input type="radio"/> Board
<b>Thesis Title</b>	<b>The Assessment of Fatigue in Ankylosing Spondylitis Patients in a Sample of Iraqi Patients</b>			
<b>Year</b>	<b>2022</b>		<b>CD: 1599</b>	
<b>Abstract</b>	<p><b>Background:</b> Ankylosing spondylitis (AS) is a chronic and systemic seronegative inflammatory spondyloarthropathy, which causes destruction and fusion of the spinal vertebrae and sacroiliac joints. Fatigue is another common complaint of AS patients. Fatigue, which is the enduring, subjective sensation of generalized tiredness or exhaustion, is affected by variety of biological, psychological, social and personal factors.</p> <p><b>Objectives:</b> To determine the prevalence of fatigue in AS and its relationship with other clinical and functional parameters.</p> <p><b>Patients and Methods:</b> This cross-sectional study was conducted at the Rheumatology Unit in Baghdad Teaching Hospital during the period from 1st November 2021 to 1st April 2022. A total of 150 consecutive patients diagnosed to have AS according to the modified New York criteria. Both males and females and age from 18 years old and above were included in this study.</p> <p><b>Sociodemographic and disease-related data, specifically the Bath Ankylosing</b></p>			

	<p>Spondylitis Disease Activity Index (BASDAI), Bath Ankylosing Spondylitis Functional Index (BASFI), Bath Ankylosing Spondylitis patient Global score (BAS-G), Multidimensional Assessment of Fatigue (MAF), Ankylosing Spondylitis Quality of Life (ASQOL) and spinal mobility measurements were measured. Fatigue in AS patients measured by BASDAI-Fatigue then calculating the MAF score for them. Correlation between MAF and BASDAI, BASFI, BAS-G, ASQOL, spinal mobility measurements and Disease related data were analysed.</p> <p>Results: This study showed 82 of 150 studied patients (55%) had fatigue. Female patients were significantly associated with fatigue P value=0.001. No significant correlation between age, disease duration, CRP, and MAF, p value&gt;0.05 in all variables. Highly Significant positive correlations were noticed between morning stiffness duration, rest pain, pain with activity, ESR, BASDI, night pain, BASFI, ASQOL, Occiput wall, and MAF, p value&lt;0.01 in all variables. Significant positive correlation were noticed between BASG, finger floor and MAF, p value&lt;0.05 in both variables. Highly significant negative correlation noticed between Schober test, chest expansion and MAF, p value&lt;0.01 in both variables. Significant negative correlation found between hemoglobin and MAF, p value=0.035. The mean of MAF score of NSAID users was lower than that of non users, p value=0.01. The mean of MAF score of employed patients was higher than that of unemployed. P value=0.001. Conclusions: Fatigue is an important symptom in AS account for approximately 55% of them, can appropriately be measured with both a single-item question in BASDAI, and with the MAF. Fatigue appears to be highly significantly associated with pain, low hemoglobin level, some metrological measures, disease activity and health-related quality of life in AS patients. Moreover fatigue may increase functional disability, which is already present as a</p>
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	feature of the disease. Fatigue may be considered as an independent domain to be systematically evaluated in AS patient.
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College Name	College of Medicine			
Department	Pharmacology			
Full name as written in passport	Ahmed Jamal Abdulrahman			
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Career	 Assistant Lecturer	 Lecturer	 Assistant Professor	 Professor
	 Master	 PhD	 Diploma	 Board
Thesis Title	<b>EVALUATING THE EFFECT OF LIRAGLUTIDE FOR WEIGHT MANAGEMENT AND GLYCEMIC CONTROL IN PATIENTS WITH TYPE 2 DIABETES MELLITUS DIYALA PROVINCE IRAQ</b>			
Year	2022		CD: 1575	
Abstract	<p><b>Background:</b> Diabetes mellitus is a metabolic disorder of multiple etiologies. It is characterized by chronic hyperglycemia together with disturbances of carbohydrate, fat and protein metabolism resulting from defects of insulin secretion, insulin action or both. It is the most common endocrine illness, affecting over 100 million individuals globally (6% of the population). It has been discovered to harm a variety of biological systems, including blood vessels, eyes, kidneys, heart, and nerves. Type 2 diabetes is the most strongly linked disease to obesity of all disorders, and the incidence of obesity-related diabetes is predicted to double to 300 million by 2025. The term 'diabesity' was coined as a result of this strong link, reflecting the fact that the majority of people with diabetes are overweight or obese. Weight loss is seen as a key therapeutic goal in the prevention and management of type 2 diabetes because the majority of patients are overweight or obese. Liraglutide is a glucagon-like peptide-1 (GLP-1) receptor agonist. It stimulates insulin secretion in a glucose-dependent manner, glucagon concentrations in the blood are decreasing, gastric emptying time is delayed, suppression of appetite, and heart rate increase. As a consequence, weight reduction in diabetic obese patients may pave the</p>			

way for successful and long-term control of their diabetes.

**Aim:** The aim of current study was to evaluate the effectiveness of Liraglutide on weight management, body mass index, blood pressure, fasting blood glucose level, lipid profile, liver function, renal function and glycosylated hemoglobin in type 2 diabetic obese patients.

**Methods:** A cross-sectional study was conducted from November 2021 to June 2022 at Baqubah Teaching Hospital/ Diyala. In current study, 50 patients (23 males and 27 females) had Type 2 Diabetic from 2 to 4 years and they were obese, hypertensive and had dyslipidemia.

Moreover, recruited patients were on treatment as prescribed by the physician before starting the study and add on the liraglutide for 12 weeks subcutaneously as 0.6 mg/day during the first week, which was gradually increased to 1.2 mg and up to 1.8 mg/day according to tolerance and requirement at the beginning the study. Patients who met the above criteria underwent measurements for their weight, body mass index, blood pressure, lipid profile, fasting glucose level, glycosylated hemoglobin as well as liver and renal function tests. Combined with prescription of several life style modifications as a 2000 kcal diet in men, or 1800 kcal diet in women and moderate daily aerobic exercise (at least 30 minutes, 5 times a week) during 12 weeks. Statistical analysis of data was performed using SAS (Statistical Analysis System - version 9.1). Two-way analysis of variance (ANOVA) and least significant differences (LSD) post hoc test were performed to assess significant differences among means. Also Chi-square test was used for proportions.  $P < 0.05$  is considered statistically significant.









**Results:** The results of current study revealed that type 2 diabetic obese patients who were treated with liraglutide for 12 weeks have shown significant decrease in the mean of body weight ( $98.08 \pm 2.27$ ) vs. ( $88.74 \pm 1.73$ ) ( $P < 0.05$ ), body mass index ( $34.7 \pm 0.69$ ) vs. ( $31.44 \pm 0.55$ ), Glycosylated hemoglobin ( $12.16 \pm 0.25$ ) vs. ( $7.53 \pm 0.08$ ), fasting blood sugar ( $262 \pm 7.29$ ) vs. ( $132.86 \pm 3.53$ ), systolic blood pressure ( $150.8 \pm 2.09$ ) vs. ( $131.2 \pm 1.62$ ) while for diastolic blood pressure ( $88.2 \pm 1.73$ ) vs. ( $74.4 \pm 1.46$ ), serum cholesterol ( $243.98 \pm 7.26$ ) vs. ( $170.28 \pm 2.91$ ), low density lipoprotein ( $143.84 \pm 4.51$ ) vs. ( $86.66 \pm 2.3$ ) and significant increase in high density lipoprotein level ( $37.64 \pm 0.83$ ) vs. ( $41.84 \pm 0.64$ ) while shown non-significant changes in the liver and renal function tests ( $P > 0.05$ ) when compared before and after 12 weeks treatment with liraglutide.

**Conclusion:** Liraglutide could be useful in the treatment of Type 2 Diabetic obese patients as it has effectively decreased the blood sugar and body weight. Also, it improved the lipid profile which could be lead to prevent or decrease the complications of diabetes mellitus.

**Keywords:** Liraglutide, Glycosylated hemoglobin, Lipid profile, Obesity, Type 2 diabetes.

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Thesis Title	The Role of Endovascular Thrombectomy in The Management of Acute Ischemic Stroke			
Year	2016		CD: 1587	
Abstract				



<b>University of Baghdad</b>				
<b>College Name</b>	<b>College of Medicine</b>			
<b>Department</b>	<b>Clinical biochemistry</b>			
<b>Full name as written in passport</b>	<b>Anwar Hilal Mathboob</b>			
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	 Master	 PhD	 Diploma	 Board
<b>Thesis Title</b>	The prime mutation of beta thalassemia major in a sample of patients from the South of Iraq			
<b>Year</b>	<b>2022</b>		<b>CD: 1593</b>	
<b>Abstract</b>	<p>Thalassemia major is an inherited disorder caused by a mutation in the beta globin gene that causes hemoglobin deficiency and anemia, which presents a threat to the patient's survival. There are various types of mutations that must be identified in different parts of the world. Iron overload causes morbidity and mortality in patients with thalassemia, as a result, iron homeostasis remains regulated. Hepcidin is a hepatic peptide hormone, is essential for iron hemostasis. The serum levels of ferritin, Superoxide dismutase, and Glutathione are important to be evaluated in individuals with beta thalassemia major patients. B-cell lymphoma 11A is a protein coding gene that primarily functions as a transcriptional repressor in hematopoietic system development.</p> <p><b>Aim of study:</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Detect the spectrum of most common mutations in thalassemia major patients.</li> <li><input type="checkbox"/> Assess single nucleotide polymorphism (Hepcidin, B-cell lymphoma 11A) in thalassemia major patients and compared with healthy control.</li> <li><input type="checkbox"/> Assess serum ferritin, Glutathione and Superoxide dismutase in</li> </ul>			

thalassemia major patients and compared with healthy control.

**Subjects, materials, and methods:**

The study involve one hundred patients with beta thalassemia major, fifty of whom were enrolled in Wasit and fifty in Maysan thalassemia II

institution. All of the patients were tested for the most common mutations

found in Mediterranean countries by Strip Assay. fifty of these patients were chosen from Wasit Province to assess serum Superoxide dismutase,

Glutathione, and ferritin levels, using ELISA technique, as well as to genotype SNP candidates Hcpidin (rs10421768) and BCL11A (rs11886868), using the (PCR) technique then comparison with fifty apparent normal healthy controls.

**Results:**

In the current investigation, the most common mutations recorded by using Strip Assay kits (Vienna Lab-Austria) were: (IVS 1.6 [T>C]), c.92+6T>C, IVS 1.1 [G>A] c.92+1G>A, IVS 1.5 [G>C] c.92+5G>C) in heterozygote beta thalassemia, whereas (IVS 1.110 [G>A] c.93-21G>A, codon 27 [G>T] Knossos c.82G>T) were found in homozygote. The Hcpidin genotypes frequency were AA, AG, and GG, whereas the BCL11A genotypes frequency were CC, CT, and TT. However, there was no significant relationship between BCL11A, Hcpidin genotyping in patients and control groups. Patients with beta thalassemia major had considerably higher mean serum ferritin levels than the control group. Serum glutathione levels in individuals with beta thalassemia major were considerably lower than those in the control group. Serum superoxide dismutase levels in individuals with beta thalassemia major were substantially greater than in the control group, measuring.

**III**









**Conclusion:**

1-The most common mutation in for beta globin gene in this study area was IVS 1.6 [T>C] c.92+6T>C.

2- The SNP (rs10421768) genotyping was AA, AG, GG the frequency of A allele was more than G in patients than healthy control while the G allele in healthy was more than patients

3- The SNP (rs11886868) genotyping was CC, CT, TT the frequency of C and T allele in patients groups were more than healthy control groups.









4- The serum level of GSH was significantly decrease in thalassemia, meanwhile the serum level of SOD, was significantly increase in thalassemia patient as compared with normal subjects.

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Career	 Assistant Lecturer	 Lecturer	 Assistant Professor	 Professor
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Thesis Title	Laboratory Assessment Of Cartilage Oligomeric Matrix protein, Semaphorin-5A and Serum Amyloid A2 in Rheumatoid Arthritis Patients			
Year	2022		CD: 1594	
Abstract	<p>The study aimed to detection the levels of Anti - cyclic citrullinated peptide autoantibodies, Human cartilage oligomeric matrix protein, Human Semaphorin 5A and Human Serum amyloid A2 with investigate the prognostic value of these biomarkers included in the study in a comparison with Anti - cyclic citrullinated peptide antibodies as well as predict the activity of disease with the response to non-biological medications methotrexate, and Biological etanercept in Rheumatoid arthritis Iraqi patients.</p> <p>The design of study was a case - control, Total of 150 individuals, Rheumatoid arthritis patients were n =100 females were 83 and males were 17 and healthy control were n =50 females were 43 and males were</p> <p>7. The study conducted at Baghdad Teaching Hospital \ The consultation clinic of Rheumatology between November 2021 to February 2022, Patients were gathered depending on criteria of diagnosis belonged to Americans College of Rheumatology 2010 and European League Against Rheumatisms, measurement of biomarkers levels by enzyme -linked immunosorbent assay.</p> <p>The findings demonstrated erythrocyte sedimentation rate, Anti - cyclic citrullinated peptide antibodies, Cartilage oligomeric matrix protein, Semaphorin 5A and Serum amyloid A2 levels all were highly</p>			

statistically significant in Rheumatoid arthritis patients than in healthy control  $P < 0.001$ . The biomarkers levels in patients group according activity of disease based on clinical disease activity index values, the levels in patients with severe activity of disease which clinical disease activity index  $> 22$  were higher significant than levels in patients with moderate or low activity of disease which clinical disease activity index  $\leq 22$  and  $P < 0.001$ , Furthermore all activities categories of disease were higher levels than healthy control level. Anti - cyclic citrullinated peptide antibodies, Cartilage oligomeric matrix protein, Semaphorin 5A levels of patients without treatments were higher significant than levels of patients received Methotrexate or patients received Etanercept  $p < 0.001$ , Serum amyloid A2 level of patients without treatments was statistically nonsignificant than level of patients received Methotrexate  $p > 0.05$  however statistically significant than patients received Etanercept  $p \leq 0.02$ . Significant positive correlation between Anti-cyclic citrullinated peptide II antibodies and Cartilage oligomeric matrix protein  $r=0.536$ ,  $p < 0.001$ , Anti-cyclic citrullinated peptide antibodies and Semaphorin 5A  $r = 0.476$ ,  $p < 0.001$ , Anti-cyclic citrullinated peptide antibodies and Serum amyloid A2  $r = 0.553$ ,  $p < 0.001$ . Anti-cyclic citrullinated peptide antibodies, Cartilage oligomeric matrix protein, Semaphorin 5A and Serum amyloid A2 Sensitivity were 72%, 78%, 83%, 97% respectively Specificity 98%, 84%, 76%, 84% respectively. The study concluded and demonstrated Anti-cyclic citrullinated peptide antibodies, Cartilage oligomeric matrix protein, Semaphorin 5A and Serum amyloid A2 were potential biomarkers to differentiation between Rheumatoid arthritis patients and healthy control with it were promising to predict activity of disease and response to treatments Methotrexate, Etanercept. Significant positive correlation between Anticyclic citrullinated peptide antibodies with study biomarkers also enhance prognostics value of Rheumatoid arthritis.

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Thesis Title	Skills of Iraqi Family Physicians in Primary Health Care Centers			
Year	2022		CD: 1595	
Abstract	<p><b>Background:</b> There has been an increase in the emphasis placed on the importance of primary care models that can provide continuous, coordinated, and comprehensive care services for individuals and families. Family physicians are playing critical roles in primary health care centers. For many doctors, this will necessitate some reorientation and the acquisition of new skills.</p> <p><b>Study objectives:</b> The study aimed to identify the skills and competencies of family physicians in primary health care centers and to find out the skills needed to concern training the most.</p> <p><b>Subject and method:</b> A cross-sectional study was conducted among a convenient sample family physician of Baghdad -Iraq for the period extended from the 1st of December 2021 to the 31st of May 2022. The data was collected from Iraqi family physicians' group on telegram by online google form; using organized structural questionnaire to be filled by them (self-administered).The instrument was presented to the expert panel and preliminarily tested in China and then Thailand. All the experts agreed that the questionnaire conformed to the conceptual framework and the objective of the study.</p> <p><b>Results:</b> The total study participants were 200 family physicians who worked at primary health care centers. The proportions of family physicians scored (3 – 5) to assess their skills in “Nutritional promotion”, “Water and sanitation” “Maternal and child health care”, “Immunization”, “Prevention and control of locally endemic diseases”,</p>			

	<p><b>“Appropriate treatment of common diseases and injuries“and “Provision of essential drugs” [117 (58.5%), 108 (54.0%), and 154 (77.0%), 156 (78.0%), 132 (66.0%), 146 (73.0%), and 121 (60.5%)] respectively. The II highest percentage of family physicians 28.6% (58) reported that “Maternal and child health care” were the most required skill, while the highest percentage of family physicians 68 (34.0%) reported that “Supply of adequate water and sanitation” was the least required competency. Whereas the skill which need training the most was “Maternal and child health care” as reported by 56 (28.0%). The skill that needs training the least was also “Supply of adequate water and sanitation” as reported by 54 (27.0%).</b></p> <p><b>Conclusions: This study concluded that most family physicians were competent, skilled, and well-trained to provide health care services in primary health care centers. Family physicians’ skills and competence were considered poor in four areas: safe water and sanitation, provision of essential drugs, nutritional promotion, and prevention and control of locally endemic diseases.</b></p>
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College Name	College of Medicine			
Department	Echocardiography			
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Career	 Assistant Lecturer	 Lecturer	 Assistant Professor	 Professor
	 Master	 PhD	 Diploma	 Board
Thesis Title	IMPACT OF COVID 19 VACCINATION ON CARDIAC FUNCTION: ECHOCARDIOGRAPHIC PARAMETER			
Year	2022		CD: 1597	
Abstract	<p><b>Background:</b> Coronavirus disease-19 (COVID-19) vaccines are massively administered globally and some adverse events, such as myocarditis and pericarditis, are being reported. Most of the reported cases of post-vaccination myocarditis have occurred following mRNA vaccinations. However, the importance of cardiac imaging ,particularly transthoracic echocardiography ,was critical in the early detection and prevention of developing more severe heart damage. Aim of the study: To assessment the impact of Covid 19 vaccination on cardiac function using echocardiography</p> <p><b>Patients and methods:</b> We conducted a cross-sectional study at Baghdad teaching hospital –Baghdad heart centre –Echocardiography laboratory during 7 months period by using transthoracic echocardiography among 30 non vaccinated participants and 30 vaccinated patients in a convenient sampling technique.</p> <p><b>Results:</b> There were 60 patients with previous coronavirus IgG positive result (30 vaccinated and 30 not vaccinated) were examined (26 men, mean (SD) age 38.3 (10.4) years). Analysis of complication found to be significantly related to non-vaccinated patient as p value was 0.018, there is no relation of the complication in vaccinated and non-vaccinated participants with the duration of ICU admission, no differences found by echo parameters in both groups, no association between the complications with each of the type of vaccine and the dose of vaccine .</p>			

	<b>Conclusion: Coronavirus vaccine side effects were overestimated and mostly recovered spontaneously or with simple treatment, most side effect occurring during first week after vaccination. Pericardial effusion was the specific post vaccine complication in our study which clinically approved with no differences among vaccinated and non-vaccinated patient's echocardiography parameters were noted.</b>
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<b>Department</b>	<i>Family Medicine</i>			
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	<input type="checkbox"/> Master	<input type="checkbox"/> PhD	<input checked="" type="checkbox"/> Diploma	<input type="checkbox"/> Board
<b>Thesis Title</b>	<b>Cyberbullying among Intermediate School Students in Kirkuk \Iraq in 2022</b>			
<b>Year</b>	<b>2022</b>		<b>CD: 1598</b>	
<b>Abstract</b>	<p>Cyberbullying is an aggressive intentional behavior that involved the use of digital devices like cell phones, computers, and tablets. It includes sharing personal or private information about someone else causing embarrassment or humiliation. Victims of cyberbullying are more likely than their peers to abuse alcohol and drugs, have physical and emotional health issues, and may suffer from low selfesteem. Poor grades in school are another consequence of cyberbullying.</p> <p><b>Aim and objectives:</b> To describe the nature of cyberbullying and determine the prevalence of cyberbullying among middle school students in Kirkuk city</p> <p><b>Methodology:</b> A cross-sectional study has been done in Kirkuk city on a sample of 442 middle school students, with a range of age from 14 – 15 years. The sample was selected by multistage stratified random sampling. The data collected by pre tested questionnaire.</p> <p><b>Results:</b> Prevalence of cyberbullying victimization was 54.5%, and practicing cyberbullying against other students was 11.5%. Cyberbullying victimization has a</p>			

significant association with gender, more in male ( $P=0.00$ ), private school ( $P=0.00$ ), higher grade ( $P=0.01$ ), more prevalent in students have more than two siblings ( $P=0.00$ ), with increase birth order ( $P=0.00$ ), living with mother only ( $P=0.00$ ), employed father ( $P=0.00$ ), employed mother ( $P=0.00$ ), decrease level of parent education ( $P=0.00$ ), students who their mothers have a history of injuries or complications during pregnancy and their delivery ( $P=0.00$ ), family displaced ( $P=0.01$ ), loss of any member of the family during the sectarian conflict

#### **IX**

( $P=0.00$ ), family conflict ( $P=0.00$ ), students who had low self-esteem ( $P=0.00$ ), had bad feeling about their schools ( $P=0.00$ ), had bad feeling about their families ( $P=0.00$ ), having mobile phone ( $P=0.00$ ), having computer in their rooms ( $P=0.00$ ), having access to internet outside the home ( $P=0.00$ ). Cyberbullying perpetration were more prevalent among male students ( $P=0.00$ ), private schools ( $P=0.00$ ), 9th grade ( $P=0.02$ ), 2 or more siblings ( $P=0.00$ ), high birth order ( $P=0.00$ ), living with their father only ( $P=0.00$ ), unemployed parents ( $P=0.00$ ), low parents education levels ( $P=0.00$ ), their mother had history of injury during pregnancy or delivery ( $P=0.00$ ), family displaced ( $P=0.00$ ), loss of any family member during conflicts ( $P=0.00$ ), students had low self-esteem ( $P=0.00$ ), feeling bad about their family and other people ( $P=0.01$ ), feeling bad about school ( $P=0.04$ ), students having mobile phone ( $P=0.01$ ), students having computers in their room ( $P=0.00$ ). There is a statistically significant relationship ( $P=0.00$ ) between students exposed to cyberbullying and practicing cyberbullying against others.

#### **Conclusion and recommendation:**

The public education (students, family and school staff) should be established at governmental level to educate them about cyberbullying among adolescents. It signs and effects on adolescent students and the importance of early

	<p><b>reporting of cyberbullying. Coordination between the Ministry of Health and Environment, Ministry of Education and Ministry of Communications to develop policies and mental health program to reduce cyberbullying victimization and perpetration among adolescents.</b></p>
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Thesis Title	Association Between Knee Osteoarthritis, Cardiovascular Risk Factors, and the Framingham Risk Score Among Sample of Iraqi Patients			
Year	2022		CD: 1600	
Abstract	<p><b>Background:</b> Osteoarthritis is the most common type of arthritis associated with significant burden on patients' health. Recent studies have revealed a relationship between osteoarthritis and cardiovascular disease using Framingham risk score (FRS).</p> <p><b>Objective:</b> To analyze the relationship between cardiovascular risk factors and knee joint osteoarthritis in a sample of Iraqi patients.</p> <p><b>Patients and Methods:</b> This study included a total of 200 consecutive patients diagnosed with knee osteoarthritis according to revised American College of Rheumatology (ACR) criteria who visited Baghdad Teaching Hospital / Rheumatology Unit from November 2021 till February 2022.(appendix1). All patients completed 2 paper questionnaires: sociodemographic, short physical performance battery (SPPB), proper history with special emphasis on cardiovascular risk factors and physical examinations including BMI, and BP measurement were recorded for all patients. Framingham risk score (FRS) used to calculate the actual 10 years risk of cardiovascular disease.</p> <p>All patient had been sent for knee x-ray and biochemical analysis including serum uric acid, HDL ,fasting blood sugar and total cholesterol.</p> <p><b>Results:</b></p> <p>A total of two hundred patients were included in this study. Mean age was <math>57.35 \pm 8.041</math> years. Significantly higher in patients greater than 60 years(p value &lt;0.001) , about 52.5 of the patients were non-smokers, which were significant (p value 0.013). twenty percent of the patients were illiterate(p value &lt; 0.001). Sixty two percent of patients were</p>			

unemployed(p value < 0.002). According to the number of times that patients have 30 minutes exercise per week; 60.5% they don't exercise(p value 0.001). The findings of the present study revealed; 44% had high risk for CVD based on FRS calculator(p value <0.001) Table 3.

**Conclusion:**









The majority of patients with knee OA are middle age , female, overweight (according to BMI), non-smokers, with multiple medical comorbidities. OA prevalence significantly associated with hypertension, DM, hyperlipidemia and among high-risk groups according to FRS.

Most patients with OA have low levels of physical activity and these factors with other risk factors may increase risk for CVD.

University of Baghdad				
College Name	College of Medicine			
Department	Family Medicine			
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Career	<input type="radio"/> Assistant Lecturer	<input type="radio"/> Lecturer	<input type="radio"/> Assistant Professor	<input type="radio"/> Professor
	<input type="radio"/> Master	<input type="radio"/> PhD	<input checked="" type="radio"/> Diploma	<input type="radio"/> Board
Thesis Title	CHARACTERISTICS OF COVID-19 PATIENTS ADMITTED TO AL-SHIFA'A HOSPITAL IN BAGHDAD			
Year	2022		CD: 16012	
Abstract	<p><b>Background:</b> Clinical and socio-demographic characteristics in patients diagnosed with COVID-19 vary in between countries across the globe. Understanding the clinical and socio-demographic characteristics of COVID-19 can help to determine the epidemiological map of the disease, identify specific groups that are more susceptible to infection and sever disease and guide future better management.</p> <p><b>Aim of study:</b> To assess the clinical characteristics and socio-demographic factors associated with COVID-19 among patients admitted to hospital ward and respiratory care unit in order to attain additional preventive actions.</p> <p><b>Methods:</b> A cross-sectional study with analytic elements conducted at Al-Shifa'a Specialized Crisis Center in Baghdad during five months' period from the 1<sup>st</sup> of January to the 31<sup>st</sup> of May 2022. It included 1520 patients aged <math>\geq 18</math> years old from the archived files who diagnosed with COVID19 infection and admitted to the hospital. Data was collected from the medical records of patients admitted to the ward and respiratory care unit.</p> <p><b>Results:</b> In this study, the most common symptom was shortness of breath in 61.3%, followed by fever (58.9%) and cough (51.9%). Eight variables were found to be the significant determinants of respiratory care unit admission. These variables were older age, diabetes mellitus, cardiovascular diseases, chronic lung and kidney diseases, positive CT Scan, elevated D-dimer level and low platelets counts.</p> <p><b>Conclusion:</b> The majority of hospitalized COVID-19 patients were between 50 – 70 years' males, nonsmokers, had chronic medical diseases, unvaccinated, and presented with fever, cough, and shortness of breath. The prevalence of admission to RCU unit was relatively high</p>			









	<p>(24.1%). Older age patients and those who had diabetes mellitus, CVDs, chronic lung and kidney diseases, positive CT Scan, elevated D-dimer level and low platelets counts were more liable for RCU admission than others.</p>
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**Keywords:** COVID-19, characteristics, clinical, RCU, admission

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Thesis Title	Awareness About Rheumatoid Arthritis in A Sample of Iraqi atients			
Year	2022		CD: 1610	
Abstract	<p><b>Background:</b> Rheumatoid arthritis is an autoimmune disease characterized by chronic, destructive, and debilitating arthritis. It is the commonest form of inflammatory polyarthritis that affects approximately 1% of the adult population worldwide. Knowledge, attitude, and practice studies can be used to determine the specific points of strength and weaknesses which can be used to structure or update educational programs to improve the general awareness among a specific group.</p> <p><b>Aim:</b> To evaluate the knowledge of the patients with rheumatoid arthritis about their disease, treatment, and complications and to explore the main impact factors that affect the patient's knowledge.</p> <p><b>Patients and methods:</b> A cross-sectional study was conducted in Iraq from the 1st of October 2021 to the 1st of April 2022. A convenient sampling method was adapted to enrol 250 participants who were diagnosed to have RA (according to the 2010 ACR/EULAR classification criteria for rheumatoid arthritis (26)), with an age of <math>\geq 18</math> years. Assessment of the participant awareness was depended on the patient knowledge questionnaire. It measured the correctness of the patient's information on RA and its treatments, it included 30 questions (correct answer was given one score, while incorrect answers or if the patient did not know the answer were assigned zero, the maximum score is 30).</p> <p><b>Results:</b> Rheumatologists were the source of information for 74 (29.6%) participants, followed by social media for 60 Participants (24%). The mean of general knowledge was 7.54 (1.37) out of 9. The highest level of awareness was among those with college or higher education, patients who got their knowledge from Rheumatologists, and those with disease duration <math>&gt; 12</math> years.</p>			



	<b>Conclusion:</b> The patient knowledge questionnaire level was higher in the current study than in similar other studies.The source of information, educational level, and disease duration significantly impacted the level of awareness of the patients.
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Thesis Title	A Comparison of Better Mobility in Patients with Ankylosing Spondylitis Receiving Anti Tumor Necrosis Factor Alpha Alone Versus Anti Tumor Necrosis Factor Alpha and Exercise			
Year	2022		CD: 1611	
Abstract	<p>Ankylosing spondylitis (AS) is a systemic rheumatic disease that affects the axial skeleton, causing inflammatory back pain, structural and functional changes which decrease quality of life. Several treatments for AS have been proposed and among them is the use of exercise.</p> <p><b>Aim:</b> To investigate the role of home based exercise in combination with anti-tumor necrosis factor-<math>\alpha</math> therapy in the treatment of ankylosing spondylitis compared with anti- tumor necrosis factor- <math>\alpha</math> therapy alone.</p> <p><b>Patients and Methods:</b> This was a case-control study which included a total of 164 consecutive patients diagnosed to have AS. Patients were divided into two groups matched in age and gender: Group 1 (89 patients): Exercise group: practicing different exercises beside the medical treatment (anti-tumor necrosis factor-<math>\alpha</math>), Group 2 (75 patients): Receiving anti- tumor necrosis factor -<math>\alpha</math> without practicing exercise.</p> <p><b>Socio-Demographic data</b> including age, gender, smoking status, marital status, employment status, exercise knowledge, body mass index, clinical data including</p>			

disease duration, disease anatomic location, comorbidities, type of anti-tumor necrosis factor - $\alpha$  and exercise-related data including type of exercise, duration, frequency, intensity, and time (in minute/week) were collected from all patients. Bath Ankylosing Spondylitis Disease Activity Index (BASDAI) and Bath Ankylosing Spondylitis Functional Index (BASFI) scores were calculated in the same interview with the patients & BASMI score was measured.

#### **XIV**

##### **Results:**

Patients without exercise demonstrated higher mean bath ankylosing spondylitis metrology index (BASMI), bath ankylosing spondylitis disease activity index (BASDAI) and bath ankylosing spondylitis functional index (BASFI) score ( $4.73 \pm 1.81$ ,  $3.66 \pm 2.02$  and  $4.5 \pm 5.62$ , respectively) than those who practiced exercise ( $4.18 \pm 1.81$ ,  $2.89 \pm 1.84$  and  $3.42 \pm 2.54$ , respectively) with significant differences ( $p = 0.04$ ,  $0.01$  and  $0.01$  respectively). Swimming, stretching and football playing exercises were significantly linked with disease severity. In particular, BASMI, BASDAI and BASFI scores  $3.66 \pm 1.49$ ,  $2.66 \pm 1.91$  and  $3.11 \pm 2.47$ , respectively in patients practicing swimming which were much lower than that in patients not practicing this type of exercise ( $4.47 \pm 1.91$ ,  $3.23 \pm 1.82$  and  $3.72 \pm 2.6$ , respectively) with significant differences ( $p = 0.04$ ,  $0.03$  and  $0.04$  respectively). Furthermore, the BASMI and BASFI score in patients practicing football was  $2.4 \pm 0.96$  and  $0.78 \pm 0.8$ , respectively compared with  $4.28 \pm 1.79$  and  $3.58 \pm 2.53$ , respectively in those who did not practicing such exercise with significant differences. The duration of exercise had a negative significant correlation with BASMI score ( $r = -0.246$ ,  $p = 0.02$ ). Also, exercise intensity showed a positive relationship with BASFI scores ( $r = 0.255$ ,  $p = 0.016$ ). The exercise time in minutes/week has a significant negative correlation

with BASFI  
scores ( $r = -0.25$ ,  $p = 0.018$ ).









**Conclusions:**

All activity and functional scores are significantly improved in patients practicing exercise compared with those receiving anti- tumor necrosis factor- $\alpha$  only. Swimming, stretching exercises & football seem to be better than other exercises in terms of reducing the disease activity and increasing the range of mobility.

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Thesis Title	<i>Immunological value of colon cancer specific antigen-2, CA242 and CA72-4 in colorectal cancer Iraqi patients</i>			
Year	2022		CD: 1612	
Abstract	<p>Colorectal cancer is a malignant tumor develops in the tissues of the colon, the longest segment of the large intestine, or the rectum, the last segment of the digestive tract, rectal and colon cancers are frequently combined because they have a lot of similarity that making it the third most common cancer and the second cancerrelated death factor (after lung cancer). It is one of the most complex diseases, with symptoms that improve and become more specific with stage and a rather short life expectancy if detected late or untreated.</p> <p>Finding a simple, non-invasive, and easily available approach (marker) for colorectal cancer for early diagnosis and to estimate disease prognosis would be very valuable, especially if the same marker could also be used to monitor the effectiveness of various treatment options.</p> <p>This study aimed to measure and compares the levels of serum colon cancer specific antigen-2 (CCSA-2), Carbohydrate antigen-242 (CA- 242), Cancer antigen 72-4 (CA 72-4) and Carcinoembryonic antigen (CEA), in patients with colorectal cancer, finding out any association between CCSA-2, CA-242, CA 72_4 and CEA levels in those patients, and draw attention to the potential diagnostic</p>			

value for these biomarkers. This study was done between November 2021 and February 2022, the participants of the study was conducted at the gastroenterology consultation clinic of oncology teaching hospital which included (100) patients with colorectal cancer, and (50) participants of apparently healthy control group. The participants' ages ranged from 26 to 75 for the patient group and from 34 to 68 for the control group. 5ml of blood samples was obtained by puncturing a vein, the serum was collected, and stored -20 degrees. An enzyme-linked immunosorbent test (ELISA) kit used to measure the serum markers of (CEA, CCSA-2, CA242, CA72-4). According to the current study, patients' serum levels of CCSA-2 was (28.39ng/ml), statistically increased when compared to control group which was (9.75ng/ml). The optimal serum CCSA-2 cutoff value was 11ng/ml. Serum levels of CA242 was (64.36 U/ml) in the patient group, and was a statistically significant difference when compared to the control group which was (18.66 U/ml). The optimal cutoff serum for CA242 was 45U/ml, CA72-4 showed a statistically significant II increases in patients' groups which was (73.07 U/ml) when compared to control group which was (13.75 U/ml), with the optimal serum level cutoff for CA72-4 in 50U/ml, CEA showed statistically significant increases in patients' groups was (19.24 ng/ml) when compared to control groups which was (3.45 ng/ml), and the optimal serum level cutoff for CEA was 5ng/ml. The serum levels of CEA, CCSA-2, CA242, and CA72-4 showed no statistically significantly difference when compare with patient age, gender, smoking, past medical history, and family history of cancer, also there was a positive correlation between CEA and (CCSA-2, CA242, CA72-4). Conclusion, serum CCSA-2, CA242, CA72-4 in compression with CEA showing

	high sensitivity and specificity can use as potential diagnostic makers for colorectal cancer
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Thesis Title	IMPACT OF HUMAN HISTIDINE RICH CALCIUM BINDING PROTEIN AND ELECTROLYTES IN CARDIAC CUPRAVENTRICULAR TACHY CARDIA : ROLE AND REQULTATION			
Year	2022		CD: 1603	

## Abstract

### Summary

Histidine rich calcium binding protein and electrolytes that proposed a role in dystrophic cardiac function that give arise to it as standardized cardiology tools in diagnosis of Supraventricular tachycardia assess the role of histidine rich calcium binding protein (HRC) and electrolytes in Supraventricular tachycardia cases, at the same time assess their benefit in the diagnoses and screening of Supraventricular tachycardia.

This cross-sectional study involved 128 individual divided into two groups, the first group included 64 healthy individual, the second group including 64 patients with Supraventricular tachycardia. All individuals with age range (17-68 years) and body mass index range ( $27.4\text{-}30.9\text{ kg/m}^2$ ) The study involved 61 females and 67males the work was carried out between March-2021 to Sep. 2022.

All patients chosen from electrophysiology lab in Baghdad medical city (Special Nursing Home Hospital) and healthy individual chosen from college of medicine university of Kerbala.

Histidine rich calcium binding protein were determined by using Enzyme-linked immunosorbent assay; while serum electrolytes were determined using was measured using ion-selective electrodes (ISE), and atomic absorption spectrophotometry.

Patient with supraventricular tachycardia show a significant decrease ( $5.29 \pm 2.65\text{ pg/ml}$ ) with  $P \leq 0.05$  in serum HRC when compared with subjects without supraventricular tachycardia, supraventricular tachycardia patients show a significant evaluation in serum of ( $\text{Na}^+$ ,  $\text{Ca}^{2+}$ ) with ( $P \leq 0.05$ ), when compared with healthy subjects, while they show a significant decrease in the serum of ( $\text{Mg}^{2+}$ ,  $\text{PO}_4^{-3}$ ,  $\text{K}^+$ ) with ( $P \leq 0.05$ ) when compared with healthy subjects. These two groups show no significant difference ( $P > 0.05$ ) in the serum level of ( $\text{Cl}^-$ ,  $\text{HCO}_3^-$ ) when compared with each other's. Serum



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Thesis Title	The Role of oxidized LDL-Auto Antibodies in a Samples of Iraqi Patients with Systemic Lupus Erythematosus			
Year	2022		CD: 1605	
Abstract	<p><b>Background:</b> Systemic lupus erythematosus (SLE) is an autoimmune disease in which the body's immune system attacks its own tissues, causing significant tissue damage and inflammation in the affected organs. Blood arteries, the brain, lungs, skin, kidney and the joints are among the organs that it may affect. Despite the fact that there is no known cure for lupus, lifestyle changes, medications, and therapies can help it reduce.</p> <p><b>Objectives:</b> The present study was carried out to investigate the role of Oxidized Low-Density Lipoprotein antibody IgM (oxLDLIgM), Oxidized Low-Density Lipoprotein antibody IgG (oxLDLIgG) and Circulating Immune complexes (CICs) in the pathogenesis of atherosclerosis in patients with SLE.</p> <p><b>Materials &amp; Methods:</b> The present study included 100 patients with SLE, (93 female and 7 male) there of mean, SD and range was 33.4 + 9.95 years, and 50 apparently healthy control groups, included 8 (16%) males and 42 (84%) females their mean of age was 34.2 + 9.1 years. The study was carried out by the (Rheumatologist at Rheumatology Unit) in the Baghdad Teaching Hospital from November 2021 to January 2022. The practical part was, conducted at the, laboratories of Medical Research Unit, Collage, of Medicine, Al-</p>			

Nahrain,  
University.

Five milliliters (ml) of venous blood were drawn from each patient. Collected "samples were centrifuged at 3000 rpm for 10 minutes to separate the gel. After dividing the serum evenly between three Eppendorf safe-lock tubes, it was frozen at -20 degrees Celsius.

**Results:** The results showed that there were substantial variances in the concentrations OxLDLIgM, OxLDLIgG and CICs between patients SLE and healthy control groups. The findings revealed that there were substantial variations in the concentration of OxLDL IgM between SLE patients and

II apparently healthy control groups, whereas, OxLDLIgM levels low in SLE patients which were (4.8 µg/L), while raising concentration in control groups which were (11.56 µg/L) In addition, the OxLDLIgG levels in SLE patients which were (9.68 µg/L) and in controls groups was (19.91 µg/L) and significant differences in concentration of CICs between SLE patients and control groups in serum patients SLE was low (7.58 ng/ml) , while raising in control groups (11.41

ng/ml)  $P < 0.05$ . Additionally, the outcomes demonstrated that there was a considerable correlation between OxLDLIgM with OxLDLIgG and CICs, and a significant correlation between OxLDLIgG with CICs. In addition ,there was no significant correlation between all markers with disease duration. Additionally,

results revealed that there was no discernible changes between SLE active and SLE inactive for all the studied markers. The levels of OxLDLIgM were (4.13 µg/L) in active phase of SLE and were (6.02 µg/L) in inactive phase of SLE, while the levels of OxLDLIgG were (9.68 µg/L) in active and inactive phases of SLE which was ( $P > 0.05$ ). Also the concentration of CICs were (7.66 ng/ml) in active phase and were (7.23 ng/ml) in inactive phase of SLE.

	<p><b>Conclusion: The concentration of all markers (OxLDLIgM, OxLDLIgG and CICs) were low in SLE patients compared with control groups. And there was no significant correlation between the levels of OxLDL IgM, OxLDL IgG Abs and the concentration of CICs with disease duration and disease activity of SLE.</b></p>
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Thesis Title				
Year	2022		CD: 16	
Abstract	<p><b>Background:</b> Heart failure is complex clinical syndrome that can result from any structural or functional cardiac disease that decreases the ability of the ventricle to fill or eject blood. More than half of heart failure patients may have moderate to severe renal insufficiency. The presence of chronic kidney disease in a patient with heart failure is associated with increased morbidity and mortality in these patients. Dapagliflozin is a selective and reversible inhibitor of Sodium-glucose co-transporter-2 (SGL2).</p> <p><b>SGLT2 inhibitors</b> provide nephroprotection through inhibition of tubuloglomerular feedback and promote afferent arteriolar vasoconstriction. This matter, in turn, serves as a mechanism to reduce intraglomerular hypertension.</p> <p><b>Aims of study :</b> To evaluate the safety and effect of addition dapagliflozin into conventional therapy on renal function in heart failure patients with chronic kidney disease with or without diabetes mellitus.</p> <p><b>Patients and Methods:</b> It was a prospective clinical study conducted in Medical wards at Nasiriya Heart Center from November 2021, to the end of July/2022. The study included 120 patients with heart failure with renal insufficiency. The patients were divided into two groups, the first group consisted of 60 patients who received dapagliflozin in addition to conventional therapy, and the other group comprised 60 patients who received only traditional treatment. Only 100 patients completed follow-up. Renal function tests, hemoglobin concentration, blood pressure, ejection fraction, and body mass index were recorded on day one as a baseline visit and then followed up after four months.</p> <p><b>II</b></p> <p><b>Results:</b> After treatment, it was found that there was a statistically significant difference in the mean levels of BMI, hemoglobin, serum</p>			

creatinine, glomerular filtration rate, and blood pressure. Patients in the dapagliflozin group had significantly lower mean levels of body mass index, serum creatinine, systolic and diastolic blood pressure compared with control group (BMI; 25.98 kg/m<sup>2</sup> vs 27.53 kg/m<sup>2</sup>, P= 0.035), (serum creatinine; 1.32 mg/dl vs 1.79 mg/dl, P= 0.043), (systolic blood pressure; 109.4 mmHg vs 121.6 mmHg, P= 0.005), and (diastolic blood pressure; 67.16 mmHg vs 75.62 mmHg, P= 0.002). Further, hemoglobin and GFR levels were significantly higher in the dapagliflozin group than in the control group (12.53 g/L vs 11.88 g/L, P= 0.038) and (58.02 vs 48.94, P= 0.001), respectively. No significant difference was detected in blood urea and ejection fraction levels between the two groups.

**Conclusion:** The study shows the clinical and biochemical benefits of adding dapagliflozin to conventional therapy. The dapagliflozin resulted in a significantly lower rate of decline in eGFR, reducing the progression of kidney disease compared to the control group.

**Keywords:** Heart failure, Dapagliflozin, Chronic kidney disease, Creatinine, Urea, Hemoglobin

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Thesis Title	Impact of Psoriatic Arthritis on Work Productivity among a Sample of Iraqi Patients			
Year	2022		CD: 1608	
Abstract	<p>Psoriatic arthritis (PsA) is a chronic inflammatory condition that can cause joint swelling, pain, and stiffness. Symptoms differ from person to person and are influenced by the disease's severity. Working disability is common in psoriatic arthritis (PsA). Psoriatic arthritis frequently results in work incapacity (PsA). Unemployment due to illness has been reported in 20 to 50% of those with PsA, and 16 to 49% have experienced limitations at work due to health problems, such as absenteeism or decreased productivity at work (presenteeism).</p> <p><b>Objective:</b> To evaluate work productivity in psoriatic arthritis patients compared to healthy controls.</p> <p><b>Patients and Methods:</b> A total of 200 participants were enrolled in this case-control study, which was conducted at the Rheumatology Unit of Baghdad Teaching Hospital in Medical City during the period from October 2021 to the end of April 2022. This study compared 100 PSA patients (who were diagnosed according to the Classification Criteria for Psoriatic Arthritis (CASPAR) to 100 healthy subjects as the control group. The selected patients and control group answered an interview that assessed data about socio-demographic and clinical characteristics, lifestyle behavior, and disease activity. Impact on work productivity was evaluated using the standardized Arabic version of the instruments: Work Productivity and Activity Impairment Questionnaire (WPAI), Work Ability Index (WAI), and Work Productivity Survey (WPS).</p>			

**Results:**

The total WPAI score was significantly higher in the PSA patients compared to that in the controls ( $5.68 \pm 1.33$  vs  $2.21 \pm 0.68$ ,  $p < 0.001$ ). The mean values of absenteeism and presenteeism scores were significantly higher in the PSA group compared with controls ( $1.72 \pm 4.48$  vs  $0.06 \pm 0.23$ ,  $P = 0.001$  and  $1.26 \pm 2.14$  vs  $0.03 \pm 0.17$ ,  $P = 0.001$ ), respectively. The total WAI score was significantly lower in the PSA patients compared to that in the controls ( $32.24 \pm 4.24$  vs  $38.53 \pm 3.37$ ,  $p = 0.001$ ). The mean total WPS score was significantly higher in the PSA patients compared to that in the controls ( $62.53 \pm 18.38$  versus  $13.04 \pm 3.59$ ,  $p = 0.001$ ).

**Conclusions**

Work productivity is significantly impaired in patients with PsA.

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Thesis Title	Evaluation of the effectiveness of different doses from alexandrite laser on Staphylococcus aureus bacteria growth in vitro			
Year	2022		CD: 1615	
Abstract	<p>Laser is a novel physical therapy technique used to treat a variety of conditions, including wound healing, inhibition of bacterial growth, and postoperative wounds. High-Power pulsed alexandrite laser therapy is one of the most prevalent forms of laser therapy, which is a noninvasive method for treating a variety of pathological conditions, thereby enhancing functional capacities and quality of life. It is a modern medical and physiotherapeutic technology. Generally, the Alexandrite laser emits infrared light with a wavelength of 755 nm, allowing it to propagate and penetrate tissues. Objective: The study focused on the application of a high-power pulsed alexandrite laser in vitro to evaluation the effect of a pulsed alexandrite laser on antibiotic-resistant bacteria utilizing varying exposure times, pulse durations, and laser fluencies to determine which dose is more effective on <i>Staphylococcus aureus</i> bacteria. Method: The laser system was fixed vertically on mechanical jack supported with height tuner screw on plane bench; so the laser beam can fall vertically on the test sample and the laser aperture was stick to the test sample. The alexandrite laser that was used in the study which was considered as pulsed laser and had the following</p>			



parameters: The wavelength was 755 nm, the beam diameter was (14 mm), the exposure times varied (30, 60, 90) seconds, the laser fluency (5, 10, 15 and 20 J.cm<sup>-2</sup>) and pulsed duration (5 , 10 , 20 ms ). The study was carried out after the bacteria were diagnosed as being resistant to antibiotics, they were exposed to different doses of Alexandrite laser. Three isolates of bacteria were exposed to laser beams for 30 seconds with a 5ms of pulse duration and with a laser fluency of 5J/cm<sup>2</sup> and the process were repeated with laser fluencies of 10, 15, and 20. The procedure was repeated using exposure times of 60sec and 90sec. As well as, the process was repeated by expose with 30 sec, 60 sec and 90 sec exposure times, 10ms pulse duration and with laser fluencies 5, 10, 15 and 20J/cm<sup>2</sup>, II separately. Also, the previous process was repeated by expose the bacteria with different exposure times (30 sec, 60 sec and 90 sec), 20ms pulse duration and with different laser fluencies (5, 10, 15 and 20J/cm<sup>2</sup>), separately.

**Results:** At 30, 60 and 90 sec exposure times, there are significant reduction ( $p = <0.0001$ ) in mean of the bacteria colonies was observed with the increase of laser fluency doses at the same pulse duration. As well as, a significant reduction ( $p = <0.0001$ ) in mean of the bacteria colonies was observed with in comparison between two laser fluencies at the same pulse duration. However, there are no significant differences in mean values of colony count between control and 5 J.cm<sup>-2</sup> at 20ms pulse duration. At 5ms and 10ms pulse durations, there are highly significant reduction ( $p < 0.0001$ ) in mean of the colonies was observed with the increase of laser fluency doses at the same pulse duration. As well as, a highly significant reduction ( $P < 0.0001$ ) in mean of the bacteria colonies was

observed with in comparison between two laser fluencies at the same exposure time. However, at 20ms, there is no significant differences ( $P > 0.05$ ) were noticed in mean of the bacteria colonies between the exposure times at 30 sec and 60 sec with all of the laser fluencies were used in current study. As well as, there are no significant differences ( $P > 0.05$ ) in mean of the colonies between exposure times at 60 sec and 90 sec when laser fluency was at  $15 \text{ J.cm}^{-2}$ , whereas there is significant difference ( $p = <0.05$ ) when laser fluencies were at 5, 10 and  $20 \text{ J.cm}^{-2}$ . A significant difference was ( $p < 0.05$ ) noticed in mean of the bacteria colonies between exposure times (30 sec and 90 sec) at all of the laser fluencies were used in our study except at  $15 \text{ J.cm}^{-2}$  laser fluency. In conclusion the exposure times, pulse durations and laser fluencies of pulsed alexandrite laser shown effect on the mean of bacterial count of *S. aureus* bacteria and determine effective dose.

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Thesis Title	ASSESSMENT OF THE EFFECT OF DIABETES MELLITUS ON BONE MINERAL DENSITY BY DUAL-ENERGY X-RAY ABSORPTIOMETRY			
Year	2022		CD: 1613	
Abstract	<p><b>Background:</b> Bone mineral density BMD has been assessed using Dual-Energy X-Ray Absorptiometry DXA. This procedure is considered to be of vital importance to assess the general condition of individuals with regard to their skeletal mineralization. BMD is measured according to the results of the DXA examination of the vertebral column and pelvis. Although diabetes mellitus (DM) is known to affect BMD, the information regarding this relationship is not currently particularly clear.</p> <p>This study focuses on the point that the assessment of BMD for the vertebral column is not sufficient to give a realistic and a correct idea about the mineralization of the remaining part of skeleton. Besides, this study elicited a generalized view about mineralization of the different parts of the body between both genders and between the left and right sides of the body. The effect of DM I and DM II on BMD was assessed in this research.</p> <p>This study involved 250 patients complaining of bone pain (125 males and 125 females), about half of whom suffered from diabetes, involving both genders. In addition, 90 apparently healthy volunteers had been considered constituting the control group. All individuals (340) in this study were exposed to the study of their BMD via DEXA for all parts of the body. DXA measurement revealed statistically II</p>			

	<p>significant differences between the sides of the body in the same subject. In addition, there was significant differences in BMD between females and males, and statistically significant differences between the control and patient groups with DMI and DMII. Finally, this study offered strong evidence that the BMD of the vertebral column and pelvis did not give an indication of mineralization in the different parts of the body for a given subject. In conclusion the DXA scan for whole body and for each part separately show promising results as alternative parameters of the DXA scan for spine or hip only for accurate diagnosis. Our results indicate that the BMD of the left and right sides for women was less than for men in all cases (normal, osteoporosis, DMI with osteoporosis and DMII with osteoporosis) for the same sides, as well as between their upper and lower limbs and ribs. Patients with DMI and DMII revealed significant reductions in BMD in comparison with other subjects who were not diabetic, even if they had osteoporosis.</p>
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Thesis Title	Quality of life, Side effects, and Adherence to Treatment in Colonic Cancer Patients Undergoing Capecitabine Treatment in Iraqi Hospitals			
Year	2022		CD: 1614	
Abstract	<p>Background: Capecitabine is a novel oral fluoropyrimidine carbamate rationally designed to allow selective 5-Fluorouracil activation in tumour tissues and approved for the treatment of various malignancies including colorectal cancer. The aim of the current study was to assess the quality of life and adherence to the treatment of Iraqi patients with colorectal cancer treated with Capecitabine and to evaluate the side effects profile of Capecitabine.</p> <p>Method: A cross-sectional, open-label prospective study was conducted at Al-Amal and Oncology Teaching Hospitals in Baghdad during the period from November 2021 to June 2022. A convenient sampling method was adopted to enrol patients in the current study. Assessment of treatment adherence based on Morisky Medication-Taking Adherence Scale. Also, Quality of life assessment was performed using the European Organization for Research and Treatment of Cancer.</p> <p>Results: A total of 102 patients were enrolled in the current study. Generalized weakness was the most common adverse event as it presented in 63.7% of participants, followed by nausea, diarrhoea, and anaemia (52%, 38%, 32%, respectively), while only 6.9% of the participants had abnormal renal function tests (6.9%). In addition, most of the participants showed low-moderate adherence to treatment. Moreover, despite the finding that some participants had a good quality of life, others did not.</p> <p>Conclusion: Patients with colorectal cancer on capecitabine treatment exhibit low-moderate levels of adherence as well as they have variable</p>			

	<p>quality of the life. These two parameters are significantly affected by the drug-related adverse effects.while sociodemographic characteristics of patients are significantly correlated to their quality of life</p>
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**Keywords:** Adherence, Capecitabine, Colorectal cancer, Quality of life, Sociodemographic.

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Thesis Title	EVALUATION THE EFFECT OF NANOPARTICLES (GOLD-SELENIUM) COMBINATION WITH CISPLATIN IN INHIBITION OF BREAST CANCER CELLS			
Year	2022		CD: 1618	
Abstract	<p>Cancer is a disease in which abnormal cells divide uncontrollably and can invade nearby normal tissues. Cancer cells can spread to other parts of the body through the blood and lymphatic system. Many advanced strategies have been used to improve cancer therapeutic outcomes, where the rapid developments and applications of nanomedicine have stimulated this progress as nanoparticles have become one of the important methods of treating cancer.</p> <p>In this work, nanoparticles have prepared type of Se nanoparticles, Au nanoparticles, Au@Se nanoparticles core-shell and Se@Au nanoparticles core-shell using the cold plasma approach with different exposure times. The properties of the synthesis nanoparticles have been examined using many technologies such as UV-Visible absorption spectrum, X-ray diffraction (XRD) and field emission scanning electron microscope (FE-SEM). The examination results of UV-Visible showed that the prepared nanoparticles had many properties, such as surface Plasmon resonance with an absorption band centered at 536 nm for Au NPs at time exposure 5 min, at 276 nm for Se NPs at time exposure 8 min, at 516 nm for Se@Au core-shell nanoparticles at time exposure 5 min and 547 nm for Au@Se core-shell nanoparticles at time</p>			

exposure 8 min.

The XRD test shows that for Au NPs the intense peaks centered at (111) which is

corresponding to lattice phase (38) degree at time exposure 5 min, for Se NPs the intense

peaks centered at (101) which is corresponding to lattice phase (29.4) degree at time exposure

8 min, for Se@Au core-shell NPs the intense peaks centered at (101) and (100) which is

corresponding to lattice phases (23.6 and 29.4) degrees at time exposure 5 min, while in the

case of Au@Se core-shell NPs the intense peak centered at (111) and is correspond to the

lattice phase at (38) degree at time exposure 8 min.

Field emission scanning electron microscope (FESEM) test shows that the average crystal

size of Au NPs was (~59.9 nm) , (~34.5 nm) for Se NPs, (~104 nm) for Se@Au NPs, and

(~76.5 nm) for Au@Se NPs.

## II

The effect of Se@Au core-shell NPs and Au@Se core-shell NPs on the breast cancer cell line

(AMN3) and normal cells line (REF) has been studied, in which the AMN3 and REF cell lines

exposed to different concentrations of the prepared nanoparticles (100%, 50%, 25%, 12.5%,

and 6.25%), then incubated for (24h and 48h), the maximum (GI) % when exposed to Au@Se

core-shell NPs at concentration 100% was (57% and 62%) when incubation for (24h, and 48h)

respectively, while the minimum GI% at concentration 6.25% was (14% and 21%) when

incubation for (24h and 48h) respectively, also the maximum (GI) % when exposed to Se@Au

core-shell NPs at concentration 100% was (44% and 51%) when incubation for (24h and 48h)

respectively, while the minimum GI% at concentration 6.25% was (8% and 15%) when

incubation for (24h and 48h) respectively, This represents the first part of this work.

The second part of this work studies the effect of Au@Se NPs and Se@Au NPs combined









with chemo cisplatin on breast cancer cells line (AMN3) and normal cells line (REF) which

were incubated for (24h and 48h) after exposure to the combination treatment, where the



concentrations of nanoparticles used in this part is the same as the concentrations mentioned in the first part while for cisplatin the concentration was (0.025  $\mu$ l). the result show the maximum (GI) % when exposed to Au@Se combined with cisplatin at concentration 100% was (70% and 83%) when incubation for (24h and 48h) respectively, while the minimum GI% at concentration 6.25% was (23% and 28%) when incubation for (24h and 48h) respectively. Also the result show maximum (GI) % when exposed to Se@Au combined with cisplatin at concentration 100% was (66% and 75%) when incubation for (24h and 48h) respectively while the minimum GI% at concentration 6.25% was (18% and 24%) when incubation for (24h and 48h) respectively has been concluded from this study that when the incubation period of cells line that are exposed to Se@Au core-shell NPs and Au@Se core-shell NPs increases, and the concentrations of the Se@Au core-shell NPs and Au@Se core-shell NPs increase, the growth inhibition rate of AMN3 cancer cells line and cytotoxicity of REF normal cells line is increased, Also, we concluded that the growth inhibition rate of AMN3 cancer cells line and

**III**  
 cytotoxicity of REF normal cell line that are exposed to combined treatment increase when the incubation period of cells lines and the concentrations of Se@Au core-shell NPs and Au@Se core-shell NPs increase. The aim of this work is to reduce the growth of cancer cells (inhibition rate), and to reduce the side effects of chemotherapy alone on vital organs using a combination of nanoparticles and chemotherapy.

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Thesis Title	Evluationof serum urine and Kidney injury molecule-1(KIM-1) and Galectin-3(Gal-3) as abiochemical marker of diagnosis early diabetic nephropathy in Type 2 diabetes mellitus			
Year	2022		CD: 1619	
Abstract	<p>One of the micro vascular problems that causes end-stage renal disease (ESRD) in people with diabetes is diabetic nephropathy. Twenty to forty percent of diabetic patients develop diabetic nephropathy. Early detection and treatment of this persistent problem may lower mortality and morbidity rates. Kidney injury molecule-1 (KIM-1), a Type I trans membrane glycoprotein produced by renal proximal tubule epithelial cells, plays a critical role in renal tubulointerstitial damage. However, investigations have shown that urine KIM-1 is an early sign of acute kidney injury (AKI) or chronic kidney disease (CKD).</p> <p>Gal-3 is a 32–35 kD glycoprotein that belongs to the lectin family with many functions. It can be found both inside cells and outside them. Galectin-3 has a complex and undefined involvement in renal illness.</p> <p>Aim of study: This study is aimed to evaluate urine and serum Kidney injury molecule-1 (KIM-1) and Galectin-3(Gal-3) as abiochemical marker of diagnosis early diabetic nephropathy in Type 2 diabetes mellitus and study the</p>			

**correlation  
between serum and urine kidney injury molecule-1 and galectin-3 with  
other  
variables.**

**Subject ,material and method :**

**A case control study included No.=150 participants males(37%) and  
female(63%) with type 2 DM, it carried out at the Baquba Teaching  
Hospital,**

**Specialized Consultation, Internal Medicine Department and Iraq  
Specialized**

**Laboratory in Baquba, Diyala, between October 2021 and  
February2022.**

**Abstrac**

**II**

**Kidney injury molecule-1 and Galectin-3 were determined by HUMAN  
ELISA**

**Reader HS in both serum & urine for both groups and other parameter  
by**

**COBAS INTEGRA 400 plus & body mass index(BMI) was calculated.**

**Result:**

**A significant difference was found in median of age and mean  $\pm$  SD of  
duration of diabetes of patients with microalbuminuria  $P \leq 0.001$ , also  
showed**

**significantly higher random serum glucose (RSG), higher glycated  
hemoglobin**

**(HbA1c) in patients with microulbuminuria  $P < 0.001$ .**

**All renal functions test (urea, creatinine and urinary albumin to  
creatinine**

**ratio) recorded much higher level in diabetic patients with  
microalbumiuria**

**with highly significant differences ( $P \leq 0.001$ ) .**

**Serum and urine levels of Kidney injury molecule-1(KIM-1) in diabetic  
patients with microalbuminuria highly significant differences  
( $P \leq 0.001$ ),serum**

**and urine levels of galectin-3(GAL-3) in diabetic patients with  
microalbuminuria highly significant difference  $P \leq 0.001$ .**

**Receiver operating characteristic (Roc) curve results of present study  
showed**

**the U.KIM-1, S.Gal-3 and U.Gal-3 parameters were scored highest  
sensitivity**

**(Sn=98%, 86%, and 84%) respectively, followed by U.ACR (Sn= 64%)  
and S.**

**KIM-1 (Sn=70%) with significant difference ( $p < 0.001^{***}$ ) in screening  
diabetics patients with normo-albuminuria. Based on specificity,  
U.KIM-1 and**

**U.Gal-3 scored highest specificity (Sp=88% and 75%) respectively,**

compared  
to U.ACR, S.Gal-3 , and S. KIM-1 that scored least specificity (Sp=58%  
52%,  
and 64%)

Abstrac

III

**Conclusions:**









Based on all of the preceding findings, it is possible to draw the  
following

**conclusions:**

**1- Higher KIM-1 and Gal-3 levels in type 2 diabetes patients, especially  
those  
with nephropathy, demonstrate the importance of KIM-1 to diagnosis  
diabetic  
nephropathy.**

**2- Rising KIM-1 and Gal-3 levels in association with abnormal kidney  
function  
lead to the identification of KIM-1 and Gal-3 as a diagnostic marker for  
renal  
injury.**

**3- Diabetic patients with and without nephropathy have greater urine  
levels of  
GAL-3 and KIM-1, making urine more suitable for assessing GAL-3  
and KIM-1**

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<b>Thesis Title</b>	<b>Synthesis of Nanoparticles Mediating laser Effect on Cancer Cells</b>			
<b>Year</b>	<b>2022</b>		<b>CD: 1620</b>	
<b>Abstract</b>	<p>Normal cells typically respond to signals instructing them to divide, differentiate, or die, but cancer cells alter the independence of these signals, causing unchecked cell growth and proliferation. Uncontrolled cell division in cancer is a fatal condition that spreads from one area of the body to others. Cancer is the leading cause of death and a significant health burden. Breast cancer is one of the most common forms of cancer in women and is associated with a high mortality rate. Hyperthermia is a minimally invasive therapy and anticancer treatment in which the malignant tumor's temperature is raised to a greater extent than the temperature of surrounding normal tissues. In the recent decade, Photo-Thermal-Therapy (PTT), a laser treatment for cancer in which the photosensitizer converts the photon energy of light into heat, has expanded. The heat generated by PTT can kill cancer cells. The present work describes the synthesis of (Au, Fe) NPs and (Au-Fe, Fe-Au) Core-Shell Nanoparticles (CSNPs) using Plasma Jet as a catalyst for nanoparticles (NPs). In vitro visible laser requires to (PTT) the</p>			

development of

Photothermal Agents (PTAs) with superior stability, low toxicity, high specificity, and high Photothermal conversion efficiency. In the current study, the

AMN3 breast cancer cell line and the normal REF cell line were used *in vitro*

study. The research found that NPs are deposited on the cell membrane or inside

cells. A continuous laser is used to irradiate samples with a wavelength of 532

nm and 650 nm by diode lasers. The structural properties Nanostructures were

studied using UV-vis, XRD, FESEM and atomic absorption.

In this research, Core-Shell NPs were successfully synthesized, using a Hydrogen

tetrachloroaurate (III) trihydrate ( $\text{HAuCl}_4 \cdot 3\text{H}_2\text{O}$ ) and iron (III) nitrite by direct

exposure to cold plasma. The UV-visible absorption spectra of these NPs shows

a red shift at (538) nm for Au-Fe NPs, an absorption was observed at (538) nm

II

indicating the formation of Au NPs as a core, and at (292,644) nm, indicating the

formation of Fe NPs. The XRD pattern was clear and did not show any impurity

peaks corresponding to other phases of gold and iron nitrite. Due to the phenomenon of surface plasmonic resonance on noble metals such as gold, the

intensity of the (111) peak at  $38^\circ$  diffraction was much stronger than the other

peaks. The morphology of the Au-FeNPs produced by the NPs are regularly

spheres with sizes ranging from  $(40 \text{ to } 130) \pm 15 \text{ nm}$ , the calculated average

diameter particle size is ( $\sim 76.9 \text{ nm}$ ) and the morphology of the NPs Fe-Au as

clumps with sizes ranging from  $(25 \text{ to } 140) \pm 15 \text{ nm}$ , the average calculated

diameter particle size is ( $\sim 67.7 \text{ nm}$ ), the UV-visible and XRD result was consistent with the FESEM morphology of the NPs (Au, Fe, Au-Fe, and Fe-Au).

This study is done in laboratory (medical physics in the College of Science for

Women) for tissue culture in sterilize condition, on three types of cell lines;

(i)AMN3 (ii)MDA as breast cancer cell line (iii) REF as a normal tissue cell line.

This study includes: Cytotoxicity assay of normal cell line(REF) and Growth

Inhibition Ratio (GI %) of breast cancer cell line(AMN3 , MDA) after preparing

the Cell Lines , In vitro study was done by two parts, the first part was a test of

four types of lasers with different wavelength( Green 532 nm , Red 650 nm , UV

345 nm and blue 445 nm) on a microtiterplate of tissues that had been cultured

and prepared in advance, the tissue was MDA cells of Breast cancer cells, Gold

(AuNPs) and iron (FeNPs) nanoparticles were previously prepared , the results of

the experiment showed that the most effective laser on Fe NPs was the red laser

with a wavelength of 650 nm, and the green laser had the most effect and

absorption of gold nanoparticles Au NPs.

The second part was after we got the result of the first part and we found out that

the green and red lasers have a high absorbance effect by nanoparticles. Here, six

sets of microtiterplate were used within the prepared tissue culture environment,

the tissue was AMN3 cells of breast cancer cells and REF cells of normal cells.

### III

Core-shell (Au-FeNPs) and (Fe-AuNPs) nanoparticles were previously prepared

and In addition to two types of lasers wavelength (532nm and 650nm) to

performed the following steps:

Two groups , first was a breast cancer cell line (AMN3) and the second was the

REF normal cell line, which were compared with each other after simultaneous

exposure to NPs and two laser wavelengths of different durations (4, 6, 8) min.









The following parameters were measured for all groups: (1) the percentage of

growth inhibition GI% of breast cancer cells after (24, 48) hrs Incubation, (2) the

cytotoxicity of normal cells after (24, 48) hrs Incubation. All cell line

**results**  
**were compared with standard breast cancer chemotherapy (cisplatin).**  
**For Au-Fe**  
**NPs in AMN3 the maximum GI% was 55.3% in case of 100% laser NPs**  
**for 8**  
**min and the maximum cytotoxicity was 16.1% in the case of 100% NPs**  
**for the**  
**REF cell line. While the results of Fe-Au NPs in AMN3 show the**  
**maximum GI%**  
**was 69.6% in case of NPs 100% with laser (8 min), and the maximum**  
**cytotoxicity**  
**in REF cell line in case of NPs 25% laser 8 min was 12.3%.**  
**The results of NPs mediated PTT showed a significant increase ( $P < 0.05$ ) in**  
**cellular inhibition in AMN3 cell line .In the REF cell line after 24 hrs,**  
**and 48 hrs**  
**of incubation, NPs with laser PTT show significant non-cytotoxicity,**  
**there was**  
**stability in the mean values of the cell growth**



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Thesis Title	Evaluation of Adherence to Methotrexate in a Sample of Iraqi Patients with Rheumatoid Arthritis Receiving Different Anti-TNF medications			
Year	2022		CD: 1621	
Abstract	<p>Rheumatoid arthritis (RA) is a chronic inflammatory disease that leads to joint destruction and disability. Current treatment guidelines for RA recommend early aggressive management with Disease-modifying antirheumatic drugs (DMARDs). Non adherence to treatment has been associated with symptom worsening and increased disability. The aim of this study is to determine the prevalence level and factors that affect adherence to Methotrexate (MTX) in Iraqi Rheumatoid arthritis patients receiving different Anti-Tumor Necrosis Factor medications.</p> <p><b>Patients &amp; Methods:</b></p> <p>This was across-sectional study included a total of 100 patients ( male =26, females=74) diagnosed with Rheumatoid arthritis according to ACR and EULAR, 2010 criteria. The selected patients answered an interview questions regarding socio-demographic, clinical and treatment information survey included the Arabic version of the eight-item Morisky Medication Adherence Scale (MMAS-8).</p> <p><b>Results:</b></p> <p>According to Morisky scale , 54% of Rheumatoid arthritis patients taking Anti-TNF medication were classified as having low adherence to MTX therapy. During multivariate analysis, Older age patients &gt;45 (OR=0.225 ,95%CI=0.097 - 0.525,p= 0.004), illiteracy (OR=4.439 , 95%CI=1.17 - 16.73 , p=0.028) , low socioeconomic state (OR=2.34 , 95%CI=0.422 -13.008 , p=0.050) , disease duration &gt;10 years (OR=0.284 , 95%CI=0.112 - 0.722 , p=0.008) , MTX use duration &gt;5 years (OR=0.353 ,95%CI=0.156 - 0.801 , p=0.013), Anti-TNF use duration &gt;3 years (OR=0.163,95%CI=0.067 -0.399 , p=0.001) , presence of side effects (OR=4.545, 95% CI=1.206-17.120, P= 0.025), non self dependent (OR=0.489,95%CI=0.389 - 0.590, P=0.020), and moderate disease activity (OR=0.249 , 95%CI=0.065 - 0.957 , P=0.043) were</p>			

significantly independent risk factors for non-adherence.

## **XII**

### **Conclusion:**

More than half of Iraqi patients with RA who are take Anti-TNF medication were classified as low adherent to MTX. Older age >45 years , illiteracy, low socioeconomic state , disease duration >10 years , MTX use duration >5 years , Anti-TNF use duration >3 years , presence of side effects , non self dependent , and moderate disease activity were significantly independent risk factors for non adherence

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Thesis Title	Measurement of Vitamin D3 Level in Insulin Dependent Diabetes With and Without Nephropathy in Iraqi Patient			
Year	2022		CD: 1622	
Abstract	<p><i>Diabetes is the most prevalent metabolic disease worldwide, and its complications are among the most important public health issues. About 30–40% of diabetic patients, especially the genetically predisposed ones, develop diabetic kidney disease (DKD), which makes it the most frequent cause of end-stage kidney disease and renal replacement therapy. Early diagnosis and early initiation of nephroprotective therapy have the potential to prevent the progression of DKD toward end-stage renal disease and to improve patients' prognosis. Vitamin D is a hormone regulating not only calcium and phosphate homeostasis but also, at the same time, exerting many other extracellular functions via genomic effects (gene transcription) and probably by non-genomic effects as well. Availability is ensured by dietary intake of its precursors and by de novo production via sunlight. Yet, vitamin D deficiency and insufficiency are very common across the globe and are connected to many pathophysiological states, for example, diabetes mellitus, allergies, autoimmune diseases, pregnancy complications. Because of the negative impact of vitamin D inadequacy and T1DM, youth with both conditions have risk factors for increased microvascular complication.</i></p> <p><b>Key words:</b> DM1, VD, DNP, microalbuminuria.</p> <p><b>The Aim of Study:</b> To evaluate the role of the level of vitamin D3 on diabetes mellitus</p>			

type 1  
and Comparison between patients of diabetes with and without  
Nephropathy in  
Iraqi diabetes .

## **II**

### **subject and Material:**

This was across-sectional study of 120 subject, 80 patients with type 1 diabetes mellitus (T1DM) with aging range between 18-40 years, they were

divided into three groups group 1-group A :DMT1 with nephropathy ( having

microalbuminuria) consisted of forty (40) patients. 2-group B:DMT1 without

nephropathy(normoalbuminuria) consisted of forty (40) 3-control consisted of

forty (40) healthy people. Some clinical information and laboratory result were

collected from the medical records (duration of DMT1, FBS, urea, S.Creatinine

and Albumin in urine), vitamin D3, HbA1c, S.Ca and S. Albumin were measured for each patient.

### **Results**

Statistically significant weak positive correlations were detected between

vitamin D and both of BMI ( $r= 0.197$ ,  $P= 0.031$ ) and GFR ( $r= 0.321$ ,  $P= 0.001$ );

while significant moderate negative correlation was seen between vitamin D and

HbA1c ( $r= -0.494$ ,  $P= 0.001$ ) and weak negative correlation was seen with B.

Urea ( $r= -0.2$ ,  $P= 0.028$ ). No statistical significant correlations detected between

vitamin D and all of age, DM duration, and s. creatinine.

### **Conclusion:**

Our data suggest an association between reduced level of Vit. D with presence of diabetes type one and diabetes nephropathy and it may be a potential

predictor for both the occurrence and severity of DNP

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	<input type="radio"/> Master	<input type="radio"/> PhD	<input checked="" type="radio"/> Diploma	<input type="radio"/> Board
Thesis Title	Early Stage Laryngeal Cancers Treated By External Beam Radiotherapy And Their Relapse -Free Survival			
Year	2022		CD: 1623	
Abstract	<p><b>Background:</b> Laryngeal cancer accounts for approximately one fourth of all head and neck cancer &amp; about 2% of all body tumors&amp; it is the tenth commonest cancer in Iraq. Possible treatment options for early stage laryngeal cancer with curative intent are either surgery or radiotherapy.</p> <p><b>Objectives:</b> The aim of this case series study was to identify the relationship between the parameters of the study with laryngeal cancer, and also to evaluate the local control rate of early stage laryngeal cancer after treatment with external beam radiotherapy.</p> <p><b>Patients and Methods:</b> a case series study of 41 patients (3 patients- Tis, 23 patients- T1, 15 patients- T2) treated with 3dimensional conformal radiotherapy in Baghdad Radiotherapy and Nuclear medicine Center, Baghdad Medical City Complex, Baghdad, Iraq, during period between January 2017 &amp; December 2020.</p> <p><b>Results:</b> The results of the study showed that the common age group were (56-65)years ,most of them were males in 70.7%, cigarette smoking also were recorded in 70.7%,all cases were squamous cell carcinoma(100%),majority were glottic cancer in 85.4%,most of cases were T1 in 56.1%,most of cases were moderately differentiated(grade 2) in 63.4%.</p> <p><b>Regarding results of disease relapse;</b> mean period of follow up was <math>25.95 \pm 13.559</math> months, the relapse incidence was 12.2%, the site of relapse was local, mean time of relapse was <math>10.6 \pm 3.578</math>, and relapse free survival for the patients in this study was <math>45.45 \pm 3.07</math> months. Local control according to T staging were Tis up to 100% ,T1 up to 79%,T2 up to 75%.</p> <p><b>Conclusion:</b> Relapse free survival in this study was <math>45.45 \pm 3.07</math> months, parameters had significant impact on relapse free survival were site, grade, stage, radiotherapy dose. Local control rates by radiotherapy</p>			

	<p>were reaching up to 100% in Tis and up to 79% in T1 and up to 75% in T2. VI</p> <p><b>Key words:</b> Laryngeal cancer, Radiotherapy, Relapse free survival, Local control.</p>
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Thesis Title	Lymphopenia a predictor of poor outcome of patients with COVID-19			
Year	2022		CD: 1624	
Abstract	<p>A lymphocyte is a type of white blood cell that is part of the immune system. Lymphopenia is a key feature in patients infected with COVID-19, especially in severe cases. It has been shown that SARS-CoV-2 disrupts normal immune responses, leading to an impaired immune system and uncontrolled inflammatory responses in severe and critical patients with COVID-19. These patients exhibit lymphopenia, lymphocyte activation and dysfunction.</p> <p><b>Aim of the study:</b> Our study aimed to evaluate lymphocyte count in COVID-19 patients as a predictor for COVID-19 severity and outcome.</p> <p><b>Methodology:</b> A retrospective observational study was conducted on one hundred patients with COVID-19 who were confirmed by PCR nasal swab and were admitted to the isolation ward of the Private Nursing Home hospital and Al- Shifaa specialty hospital from the period extended from the beginning of April to the end of September 2021. The data was collected using a structured questionnaire.</p> <p><b>Results:</b> A total of 100 COVID 19 patients were included in the study with mean age 57.45±5.239 years. 59% of patients aged 60 years or older and 31% were within age group 40-59 years. Out of the total patients, 55% were males and 45% were females, 63% were hypoxic, 59% hospitalized for less than 15 days and 29% were hospitalized for 15-28 days. According to the severity of the disease, moderate severity was found among 65% of patients while severe and critical illness found among 35% of the patients, there were 52 (52%) survivors and 48 (48%) deaths. Absolute lymphocyte count was significantly higher among survivors, P&lt;0.001, moderate severity was significantly higher among survivors, P=0.002. Low oxygen saturation and severe illness found to be a potential risk for death with significant differences, [P=0.023, OR=2.8, CI 95%= (1.2-6.5)] and [P =0.002, OR=7.5, CI 95%= (1.3-43)] respectively. For prediction of diagnosis (depending on survival</p>			

## **VII**

group) in the study, ROC analysis for diagnostic indices of lymphocyte was done. Comparison of the area under curve (AUC) revealed that lymphocyte had the widest area under the curve, they were good predictors (0.861) with significant association,  $p < 0.001$ . Lymphocyte cut - off point of 0.51 or higher predicted survivors.

**Conclusion:** The study results have shown that male patients, and those who were older than 60 years have a higher risk for severe COVID-19. Blood workup in infected patients revealed that absolute lymphocyte count was significantly higher among survivors in comparison with non-survivals, which could be utilized as a predictor for patients' prognosis. Low oxygen saturation and severe illness were found to be a potential risk for death with significant difference



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Thesis Title	<i>The Impact of Metformin alone in comparison with Metformin and omega 3 combination on lipid profile in women with polycystic ovarian syndrome .</i>			
Year	2022		CD: 1625	
Abstract	<p>PCOS is the most prevalent endocrine syndrome affecting women of reproductive age. Symptoms of excess androgen (hirsutism, alopecia, acne), obesity, and menstrual cycle disruption (oligomenorrhea or amenorrhea) have long been associated with persisting ovaries with many (2-8 mm) tiny cysts and hyper-vascularized androgen-secreting stroma. The disease involves any of these indications, symptoms, or endocrine problems (high serum androgen and/or luteinizing hormone (LH) concentrations). The disorder is described as a combination of hyper androgenism and ovulatory failure in the absence of non-classical adrenal hyperplasia, with no need for ultrasonography to rule out polycystic ovaries.</p> <p>PCOS affects 85–90% of women with oligomenorrhoea and up to 30–40% of women with amenorrhea. Anovulation appears to be increased in obese PCOS women by disrupting the hypothalamic-pituitary-ovarian axis, leading to increased LH levels that prevent follicular development. Weight loss can aid in the restoration of ovulation and regular periods caused by oligo- or amenorrhoea . Those with obese PCOS have a lipoprotein profile with high plasma triglycerides and low levels of lipoprotein cholesterol (HDL-C), comparable to patients with type 2 diabetes(Sohaei <i>et al.</i>, 2019). In PCOS, levels of low-density lipoprotein cholesterol (LDL-C) are frequently slightly raised. However, a straightforward quantitative calculation of LDL content may be inaccurate since LDL does not present as homogenous particles.</p> <p><b>Aim of study:</b></p> <p>The aim of this study is to evaluate the effect of using metformin (1000mg /day ) and omega 3(1000mg ) for 3 consecutive months on lipid</p>			

#### **XIV**

**profile (triglyceride, cholesterol, HDL ,LDL, VLDL ) and on hormonal level (LH, FSH ,prolactin )(in prospective manner ) in women with PCOS.XV**

#### **Methods:**









**A total 60 women (18-40 )years old were diagnosis with poly cystic ovary syndrome according to world health organization (WHO) classification were referred to gynecology outpatient clinic and infertile center in AL-batol hospital in Al- kut were included to this study .The control group contain 20 healthy women with normal lipid profile and normal (LH,FSH ,prolactin). These patients was admitted to the hospital for farther investigation to ensure that they are not suffering from other disease like DM , cardiac disease ,thyroid disease ,hypertension ,renal disease ,hepatic disease ,so they don't interfere with the measurement of our parameters . There lipid profile and hormonal parameters were measured before and after treatment .**

#### **Result:**

**Show that use combination of metformin and omega 3 is more significant in enhancing lipid profile and hormonal parameter rather than metformin alone ,this combination decreased (LH,FSH ,CHOL.,TG ,LDL,VLDL) , increase HDL level and has no effect on prolactin hormone .**

#### **Conclusion:**

**Use of metformin and omega3 as combination is more benefit than metformin alone in enhancing lipid profile and hormonal parameter in patients with PCOS .**

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<b>Thesis Title</b>	<b>Patients' Knowledge, Attitude, and Practice Regarding Hypertension in Baghdad Teaching Hospital, 2022</b>			
<b>Year</b>	<b>2022</b>		<b>CD: 1626</b>	
<b>Abstract</b>	<p>Background; Hypertension is regarded as a major public health problem worldwide. It is considered one of the leading causes of death and a frequent cause of outpatient visits.</p> <p>Aims of the study; Is to measure the patient's knowledge, attitude and practice score toward hypertensin and to assess the association between knowledge and control of hypertension.</p> <p>Patients and Method; In this cross-sectional study conducted at the outpatient clinic in Baghdad Teaching Hospital, 400 hypertensive patients were enrolled from Jan. 2022 to Aug. 2022, and data was collected by interviewing patients to answer questions in a structured questionnaire form which included demographic characteristics and questions regarding knowledge (n = 12), attitude (n = 9), and practice (n = 8) of hypertension.</p> <p>Results; The mean age of the study samples was <math>54.27 \pm 11.36</math> years,</p>			

	<p><b>44.3% were males and 55.8% were females. Sixty percent of the participants had fair knowledge, 78% had good attitude and 43% had poor practice toward hypertension.</b></p> <p><b>Seventy percent of participants were aware of the typical blood pressure range. The majority of the participants were aware that stress (86%), obesity (72%), and ageing</b></p> <p><b>2</b></p> <p><b>(75%) are all risk factors for hypertension. About 51% of participants were aware of the dangers of uncontrolled hypertension.</b></p> <p><b>Conclusions; It can be concluded from this study that the hypertensive participants from Baghdad teaching hospital had relatively good knowledge, good attitude, but fair practice toward hypertension.</b></p> <p><b>Keyword; Hypertension, Knowledge, Attitude, Practice, Iraq</b></p>
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





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Thesis Title	Prevalence of Neuropathic Pain in a Sample of Iraqi Patients with Primary Knee Osteoarthritis			
Year	2022		CD: 1628	
Abstract	<p>Osteoarthritis is one of the leading causes of disability in the world , the most common form of this disease affecting the lower extremities is knee osteoarthritis . Chronic pain in knee osteoarthritis is currently characterized as nociceptive pain , some patients also have neuropathic pain . Treatment strategies focusing on the neuropathic pain should be kept in mind while treating knee osteoarthritis patients for better control of the pain .</p> <p><b>Aim of the study</b></p> <p>The aim of this study was to estimate the presence of neuropathic pain in a sample of Iraqi patients with primary knee osteoarthritis .</p> <p><b>Patients and Methods</b></p> <p>A cross sectional study conducted among 160 Iraqi patients diagnosed with knee osteoarthritis according to the American College of Rheumatology criteria were selected through consecutive sample from those attending Rheumatology Unit in Baghdad Teaching Hospital and Azadi Teaching Hospital during period from October 2021 to March 2022.</p> <p>Data were collected by questionnaire that administered through doctor and participants interview , Patients were evaluated with visual analogue scale for pain severity , Western Ontario and McMaster Universities osteoarthritis index for physical function , and the Kellgren - Lawrence system for severity of osteoarthritis . Presence of the associated risk factors were also questioned. The presence of neuropathic pain was assessed by painDETECT questionnaire , according to which subjects were classified into three groups , the painDETECT score indicates likely neuropathic pain ( score &gt;18 ) , possible neuropathic pain ( score 13 to 18 ) , and unlikely neuropathic pain ( score &lt; 13) . The data analyzed using Statistical Package for Social Sciences (SPSS) version 23 .</p> <p>V</p>			

### **Results**

**A total of 160 patients [139 ( 86.9 % ) female and 21 (13.1 %) male] with primary knee osteoarthritis . 7.5 % of the patients had likely neuropathic pain , 11.3 % had possible neuropathic pain , while the remaining 81.2 % had unlikely neuropathic pain . There was a statistically significant difference in duration of knee symptoms , Western Ontario and McMaster Universities osteoarthritis index total score , Kellgren – Lawrence grading system , and Visual Analogue Scale between unlikely and likely neuropathic pain groups . PainDETECT score had a significant correlation with knee osteoarthritis severity measured by Kellgren – Lawrence grading system , Western Ontario and McMaster Universities osteoarthritis index total score , duration of knee symptoms , and Visual Analogue Scale.**

### **Conclusion**

**Although pain in knee osteoarthritis is historically considered as nociceptive , the study revealed that some patients have neuropathic component .**

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<b>Thesis Title</b>	<b>Antioxidant Effect of Hydroxocobalamin and Ascorbic acid on Methotrexate Induced Ovarian Damage in Female Albino Rats</b>			
<b>Year</b>	<b>2022</b>		<b>CD: 1629</b>	
<b>Abstract</b>	<p>Methotrexate is a chemotherapeutic agent which has been used in different type of cancer and malignant diseases, it is also used to treat certain inflammatory conditions like psoriasis, rheumatoid arthritis and Crohn disease. It is absolutely contraindicated in the intra-uterine gestation due to it's anti- folate action that result in abortion and teratogenicity. Even in nursing women and people planning to be parents; methotrexate should be avoided since it targets the highly reproductive tissues causing DNA damage, suppression of those tissue growth or development and induction of cellular apoptosis by increasing levels of oxidative stress.</p> <p>Hydroxocobalamin: is a vitamin B12 synthetic form which is used for treatment of conditions caused by vitamin B12 deficiency and as antidote in cyanide poisoning. It is known to have an indirect anti-oxidant activity by scavenging of reactive species, stimulation of some anti-oxidant enzymes and modulation of cellular signal molecules.</p> <p>Ascorbic acid: is one of the most essential anti-oxidant vitamins which play a large physiological role in human body. It has the ability to recycle other anti-oxidants and inhibit oxidative stress.</p> <p><b>Aim of study:</b> The aim of this study is to study the anti-oxidant activity of hydroxocobalamin alone, ascorbic acid alone and the combination of them on ovarian reserve and oxidative damage caused by methotrexate treatment.</p> <p><b>Materials and Method:</b> Forty-five female albino rats of 3 to 5 months age were divided in to five</p>			

groups randomly as following:

1. Control group in which rats were treated with weekly intraperitoneal injection of 0.5 ml of normal saline for 4 weeks.

2. Methotrexate group in which the rats were treated with weekly intraperitoneal dose of 2.5 mg/ kg of methotrexate injection for 4 weeks.

3. Hydroxocobalamin group in which rats were treated with daily intraperitoneal dose of 50 µg/ kg of hydroxocobalamin injection and weekly intraperitoneal dose of 2.5 mg/ kg of methotrexate injection for 4 weeks.

4. Ascorbic acid group in which rats were treated with daily oral dose of 100 mg/ kg of ascorbic acid and weekly intraperitoneal dose of methotrexate injection for 4 weeks.

II

5. The combination group in which rats were treated with daily intraperitoneal dose of 50 µg/ kg of hydroxocobalamin injection , daily oral dose of 100 mg/ kg of ascorbic acid and weekly intraperitoneal dose of 2.5 mg/ kg of methotrexate for 4 weeks.

After 48 hours of last methotrexate dose, all rats were anesthetized and blood sample were drawn from them for the determination of plasma Glutathione, superoxide dismutase, malonaldehyde, and Anti-Mullerian.

Later animals were sacrificed and their ovaries were extracted for the histopathology investigations.

**Results**

The weekly intraperitoneal dose of methotrexate for a month showed histopathological changes in the rats' ovaries in comparison to the control group as there was a slight increase in the damaged cells throughout the tissues of the ovaries.

The additive treatment with daily oral ascorbic acid or hydroxocobalamin or with both of them showed insignificant reduction in the damaged effects of methotrexate in the ovaries. While a significant difference was shown in the levels of oxidative stress biomarkers in the group which received the weekly intraperitoneal dose of methotrexate in comparison to the control group as the levels of Glutathione and superoxide dismutase significantly decreased ( P-value< 0.05) with significant increase in malonaldehyde levels (P-value= 0.018).

In the case of the groups treated with daily oral ascorbic acid or intraperitoneal hydroxocobalamin or with both of them in addition to the weekly intraperitoneal dose of methotrexate for a month; the levels of oxidative stress biomarkers were significantly different in compare to the group treated with methotrexate alone as there were significant increase in Glutathione and superoxide dismutase levels and significant decrease in malondialdehyde levels( P- value< 0.05).

**Conclusion**



	<p><b>The treatment of ovaries which are exposed to methotrexate oxidative stress with ascorbic acid and/or hydroxocobalamin can significantly ameliorate the oxidative damage of methotrexate.</b></p> <p><b>The weekly using of relatively low methotrexate dose does not affect the ovarian reserve significantly and the using of ascorbic acid and/or hydroxocobalamin with methotrexate shows no significant benefit.</b></p>
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Thesis Title	Knowledge, Attitude, and Practice of Pregnant Women Attending Antenatal Clinic Towards Bilateral Tubal Ligation in Al-Ramadi Teaching Hospital-2022			
Year	2022		CD: 1630	
Abstract	<p><b>Background:</b> Bilateral tubal ligation (BTL) is the commonest method of contraception worldwide; but is yet to gain wide acceptance in Iraq as a result of many factors. According to The United Nations High Commissioner for Refugees (UNHCR) &amp; Women's Refugee Commission (WRC) 2011 found that very few or no women had ever used the BTL (2.4%) in Iraq. Lack of knowledge and wrong perception about possible side effects of contraceptive methods are important reasons for non-compliance in contraceptive use and contribute to method failure and unwanted pregnancies. There are very few studies on knowledge and practice of contraception in Iraq, and this study was aimed to evaluate the knowledge and practice of participants regarding tubal ligation.</p> <p><b>Objective:</b> To assess the knowledge, attitude, and practices of women attending antenatal clinic towards bilateral tubal ligation and its association with sociodemographic characteristics.</p> <p><b>Patients and Methods:</b> A descriptive cross-sectional study was carried out on pregnant women attended the consultation clinic at Al-Ramadi Teaching Hospital/obstetrics and gynecology from December 2021 to April 2022. The information</p>			

was gained by direct interview with the pregnant women for the demographical data and filling the information regarding knowledge, attitude, and Practice of 500

fit pregnant women. Official approvals was obtained.

Results: A significant association was found among age  $\geq 30$  years with knowing

that tubal ligation is (Tubes are tied), (BTL is safe), (BTL protect from STDs/HIV), respectively. Unemployed participants with lower education was

significantly associated with (womb is tied).

## II

Participants that aged 30 years or more thought that (BTL Successful reversal is

NOT guaranteed) and (Tubal ligation would NOT affect a woman's period) and

(BTL would NOT make the women gain or lose weight) with significant association, respectively. Knowledge of participants about bilateral tubal ligation

was poor among 286 (57.2%). Attitude of participants was poor among 438

(87.6%). While practices of participants was poor among 395 (79.0%).

## Conclusions:

Poor knowledge are associated with ages  $< 30$  years and primigravida.

Poor

attitude was significantly associated with ages  $< 30$  years, unemployment,









education secondary school and below, and with primigravida. Poor practices was

significantly associated with employment, education of higher than secondary

school, and with primigravida. Poor knowledge was significantly associated with

poor attitude.

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<b>Thesis Title</b>	<b>THE EFFECT OF ROSUVASTATIN AND ATORVASTATIN ON INFLAMMATORY MARKERS IN IRAQI PATIENTS WITH ACUTE CORONARY SYNDROME :(DOSE &amp;TYPE).</b>			
<b>Year</b>	<b>2022</b>		<b>CD: 1631</b>	
<b>Abstract</b>	<p><b>Background:</b> The term acute coronary syndrome (ACS) is used to describe the early stage of coronary artery disease with or without cardiomyocyte necrosis by decreasing blood flow alters the work of the heart. Several coronary risk factors include age, gender, family history, hypertension, diabetes, metabolic syndrome, hypercholesterolemia, smoking, and Covid 19. All these factors elevated the inflammatory marker such as C-reactive protein (CRP), Interleukin 6 (IL6), and Tumor necrosis alpha (TNF-<math>\alpha</math>) especially during the COVID-19 outbreak, the number of patients who have developed acute coronary syndromes (ACS) has soared rapidly, caused cardiac damage.</p> <p>Statins are a class of drugs that lowers the level of cholesterol in the blood by reducing the production of cholesterol by the liver. Statins can slow the formation of new plaques and occasionally reduce the size of existing plaques. In addition to lowering cholesterol levels, statins also reduce inflammation, which could be another mechanism by which statins beneficially affect atherosclerosis. This reduction of inflammation does not depend on statins' ability to reduce cholesterol. This study aims to evaluate the effect of different types of statins ( in different doses) on HS-CRP, IL-6, and TNF-<math>\alpha</math> in Acute coronary syndrome. Compare the HS-CRP, IL-6, and TNF-<math>\alpha</math> between unstable, stable acute coronary syndrome &amp; other healthy populations. Compare the effect of statin on HS-CRP, IL-6, and TNF-<math>\alpha</math> between patients who have Acute Coronary Syndrome with COVID-19 and without COVID -</p>			

**19.**

**Methods:** This observation, comparative cross-sectional study was conducted at the Coronary Care Unit (CCU) patients in Baghdad Teaching Hospital & Iraqi center of cardiology /Medical City. Baghdad/ Iraq from November 2021 to April 2022. patients diagnosed with Acute Coronary Syndrome by cardiologists were

**VIII**

**Eighty-Six** divided into two groups:

**Group (1):** Included (36) patients previous taking statins,

**Group (2):** included (50) patients' first-time taking statins,

**Subgroup:** Patients from These Groups have previous covid 19.

**Inflammatory biomarkers (TNF- $\alpha$ , IL-6, and HS-CRP) levels** were determined in serum samples of all patients at admission to these centers then one month later, after administration of statins daily using the Sandwich-ELISA Principle, and Immunofluorescence technique for the markers.

**Fifty patients** are divided into two groups:

**Group A:** Included (25) patients treated with statin before elective PCI who presented stable coronary syndrome.

**Group B:** Included (25) healthy control subjects.

**Results:** In this study, the influence of statins (according to type) with the same dose on inflammatory biomarkers in patients who were prescribed statins for the first time and didn't take statins previously showed Rosuvastatin 40 mg observed a significant reduction in HS-CRP and IL6 ( $p < 0.0001$ ) while Atorvastatin 40 mg observed a significant reduction in HS-CRP ( $P < 0.019$ ) only after one month of continuous treatment from the onset of ACS. Effect of statins (according to dose) from 20 mg to 40 mg changed in CCU with the same type on inflammatory biomarkers on patients who had previously taken statins showed Rosuvastatin observed a significant reduction in HS-CRP ( $p < 0.016$ ) and IL6 ( $p < 0.010$ ) after one month of continuous treatment from the onset of ACS and decrease in the level of TNF- $\alpha$  but not significant after the same period while Atorvastatin observed a significant reduction in IL6 ( $p < 0.011$ ) after the same period of the study but not significant on both HS-CRP and TNF- $\alpha$ . The influence of Inflammatory markers on patients who had previously taken statins when changing the type from Atorvastatin 40 mg to Rosuvastatin 40 mg observed a significant reduction of HS-

**IX**

**CRP ( $P < 0.000$ ), IL6 ( $P < 0.041$ ), and TNF- $\alpha$  ( $P < 0.024$ ).** When comparing the inflammatory markers between unstable acute coronary syndrome, and stable coronary artery diseases (control1), showing HS-CRP ( $6.91 \pm 8.4$ ), ( $5.79 \pm 5.87$ ), and IL -6 ( $46.35 \pm 33.09$ ) ( $39.46 \pm 30.91$ )









respectively and when compared to the healthy population(control 2) not reach to the HS-CRP, IL-6 of them. TNF- $\alpha$  significantly higher effect on a group with ACS using statins for one month compared to (control1) and (control2). The sub-group of COVID-19 from group A patients who have first-time take statins & group B who had previously statin therapy comparing the inflammatory makers between two groups of patients with ACS who did not get infected by covid-19 and others who got a covid-19 infection showed higher inflammatory markers IL-6, HS-CRP, TNF- $\alpha$  in the group who had COVID-19 with ACS than another group who hadn't COVID -19. Effect of statins (according to type) on inflammatory biomarkers among these groups showed those receiving Rosuvastatin 40 mg statistically significant reduction HS-CRP and IL6 while Atorvastatin 40 mg statistically significant reduction HS-CRP only after one month during the period of follow-up. But, both Rosuvastatin and Atorvastatin were statistically not significant in the decreasing TNF  $\alpha$  at the end of this study period.

**Conclusion:**

- Rosuvastatin was more significant in a reduction of IL- 6 and HS-CRP than Atorvastatin in the short duration of one month.
- Although the previously infected patients with COVID-19 still had higher inflammatory markers than non infected, both showed a significant reduction of inflammatory markers after statin therapy.
- Both Atorvastatin and Rosuvastatin could not reduce significantly TNF- $\alpha$  in this short period.

**Keywords:** Statins, inflammatory markers, Acute Coronary Syndrome, COVID-19.

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<b>Thesis Title</b>	<b>STUDY OF EFFICACY OF INTRALESIONAL PENTOXIFYLLINE VERSUS TRIAMCINOLONE ACETONIDE IN KELOID SCARS OF HUMAN</b>			
<b>Year</b>	<b>2022</b>		<b>CD: 1617</b>	
<b>Abstract</b>	<p>Keloids are prevalent fibro-proliferative lesion, and treating them is still a challenge. Although intralesional injections of triamcinolone acetonide (TAC) are effective, they have frequently linked adverse effects. Pentoxifylline (PTX) is an anti-fibrotic and anti-inflammatory and vasodilator.</p> <p><b>Aim of the study</b></p> <p>The aim of the study is to study the efficacy and safety of intralesional pentoxifylline versus triamcinolone acetonide in treatment keloid scars of 40 patients.</p> <p><b>Patients, materials and methods</b></p> <p>In this study, 40 patients with keloid scars regardless of the cause of keloid born, 20 patients have injected with intralesional triamcinolone acetonide, and 20 patients with intralesional pentoxifylline every two weeks until the lesion flatted or a maximum 6 sessions. The patients in</p>			

the current study were divided into two groups: in group A twenty patients with keloid were given intralesional triamcinolone acetonide 40mg/ml (taked 20 mg/ml diluted with lidocaine for maximum 6 sessions every two weeks, group B twenty patients are given intralesional pentoxifylline 100mg/5ml. Evaluation of Patient response to treatment was done by utilizing the verbal rating scale, visual analogue scale and Vancouver scar scale.

#### **Results**









Between group A(triamcinolone acetonide group)& B(pentoxifylline group) there is no statistically significant difference in height, color, the surface of the keloid, pigmentation consistency, verbal rating scale, visual analog scale (improvement in keloid) and patient satisfaction. There were no relations that are statistically significant between improvement on the Vancouver scar scale and age, the height of the keloid, and duration of the keloid scars and there were no statistically significantly different between the group B and group A.

#### **Conclusion**

Intralesional pentoxifylline and intralesional Triamcinolone are effective in the treatment of keloid scars, These effects of intralesional triamcinolone acetonide on fibroblast proliferation and VEGF production, which result in scar tissue atrophy, could be responsible for these outcomes. The disadvantage of triamcinolone acetonide is the side effect of it such as Telangiectasia, hypopigmentation, and striae. Both of them (pentoxifylline & triamcinolone acetonide) decrease the thickness of keloid scars but Triamcinolone acetonide is more effective than pentoxifylline therefore a combination of therapies is more recommended in the treatment of keloid scars.



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<b>Thesis Title</b>	<b>Significance of Blink Reflex as a Neurophysiological Marker of Cranial Neuropathy in Diabetic Patients</b>			
<b>Year</b>	<b>2022</b>		<b>CD: 1635</b>	
<b>Abstract</b>	<p>The blink reflex serves as an objective indicator of the cranial and central nervous systems and their conduction pathways. The blink reflex (BR) is an electrical analog of the corneal reflex which is elicited clinically. Diabetic neuropathy is a spectrum of clinical and subclinical syndromes with differing anatomical distributions, clinical courses, and possibly differing underlying pathogenic mechanisms. Each is characterized by diffuse or focal damage to peripheral somatic or autonomic nerve fibers resulting from diabetes mellitus. Diabetic polyneuropathy has been defined as a "symmetrical, lengthdependent sensorimotor polyneuropathy". Diabetic neuropathies are the most prevalent chronic complications of diabetes. The cranial neuropathies incidence is higher in diabetic patients in comparison to healthy people. The oculomotor and facial cranial nerves are</p>			

commonly affected, but trigeminal, glossopharyngeal, and vagus nerves are also affected. The blink reflex is a measure of the cranial and central nervous system conduction pathways. This study aims to assess the significance of the blink reflex in the early detection of cranial neuropathy in diabetic patients, as well as to compare the blink reflex abnormalities in diabetic patients with glycated hemoglobin (HbA1c), duration of diabetes, and level of neuropathy. This case-control study is conducted at the neurophysiology unit in Ghazi Al-Hariri Hospital in Baghdad during the period from the first of November/2021 to February/2022. Which included a group of sixty diabetic patients compared with sixty healthy individuals (non-diabetic) without any pain, Paresthesia, or weakness in either limb.

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A significant statistical difference between the cases and control was for R1 latency, ipsilateral R2 latency, contralateral R2 latency, ipsilateral R2 duration, and contralateral R2 duration with a P-value  $<0.001$ . Except for the blink reflex's R1 latency (P-value  $>0.2$ ), all other Blink reflex parameters were statistically different between patients who experience diabetic neuropathy and those who didn't. No statically significant correlation was found between the duration of diabetes mellitus and the blink reflex parameters. Regarding glycated hemoglobin, a significant positive association with IR2 latency and CR2 latency was noted ( $r = 0.3$ , P-value  $<0.001$ ), and also, a strong negative association was found with IR2 duration and CR2 duration (P-value  $<0.001$ ). Sural, peroneal, and tibial nerves amplitudes correlated negatively with the blink reflex Latencies and positively with the blink reflex durations.

**In Conclusion:** The blink reflex test is an effective tool for diagnosing

	cranial neuropathy in individuals with diabetes without clinical symptoms or proof of central nervous system damage with and without peripheral neuropathy, and its relation to glycemic state, and severity of neuropathy.			
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Thesis Title	The Cytoprotective Effects of Aliskiren and Pirfenidone on Diclofenac Sodium-induced Gastric Ulcer in a Rat model			
Year	2022		CD: 1632	
Abstract	<p>Non-steroidal anti-inflammatory drugs are widely prescribed in clinical practice because of their ability to reduce pain, fever, and inflammation. However non-steroidal anti-inflammatory drugs-induced gastric mucosal damage is the major side effect of these medications. Therefore, this study will investigate the possibility of using new medications as cryoprotectants like Pirfenidone and Aliskiren.</p> <p><b>Objective:</b></p> <p>The objective of this study is to reduce gastric mucosal lesions caused by non-steroidal anti-inflammatory drugs by using Pirfenidone and Aliskiren by investigating their effect on histological, gastric gross mucosal damage, and immunohistochemistry assay of biomarkers tumor necrosis factor-alpha, myeloperoxidase, and malonaldehyde outcomes on the experimentally induced gastric ulcer. Furthermore, the mechanisms underlying their gastro-protective actions are being investigated.</p> <p><b>Methods:</b></p> <p>Fifty healthy male albino rats were divided into five groups each of ten (N=10). A single oral dose of Diclofenac sodium (150 mg/kg body weight) was used to induce ulceration for all groups except the first. The vehicle (tween 80+normal saline) was given to the first group, while Diclofenac sodium was given to the second group and to all pretreated groups. The third group pre-treated with Omeprazole (the reference drug) at a dose of (20 mg/kg), while the fourth and fifth groups were</p>			

pretreated with Pirfenidone (300 mg/kg), and Aliskiren (200 mg/kg) respectively. At the end of the experiment, histological

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examination, and antioxidant and anti-inflammatory parameters by immunohistochemistry method were evaluated.

#### Results:

Diclofenac sodium at a dose (150 mg/kg) produces a significant increment ( $p>0.01$ ) in gastric damage score, the expression of tumor necrosis factor- $\alpha$ , myeloperoxidase, malonaldehyde, and the ulcer formation percent, compared to the healthy rat's group.

Pirfenidone at a dose of (300 mg/kg) pretreatment in Diclofenac induced-ulcer in rats produces a significant reduction ( $p>0.01$ ) in gastric damage score, the expression of tumor necrosis factor- $\alpha$ , myeloperoxidase, malonaldehyde, and in the ulcer formation percent, showing comparable results to those of the reference drug (Omeprazole).

Aliskiren at a dose of (200 mg/kg) pretreatment in Diclofenac induced-ulcer in rats produces a significant reduction ( $p>0.01$ ) in gastric damage score, the expression of tumor necrosis factor- $\alpha$ , myeloperoxidase, malonaldehyde, and in the ulcer formation percent, yet, less effectively than Omeprazole and Pirfenidone.

#### Conclusion:









The results presented by this study confirm the damaging effect of Diclofenac sodium on the gastric mucosa in rats. These results also demonstrated that the injurious effect of Diclofenac can be reduced or prevented by the pre-treatment of Pirfenidone and Aliskiren, Pirfenidone showed similar results to the standard treatment (Omeprazole), while Aliskiren showed less protective effect than Omeprazole and Pirfenidone against Diclofenac sodium-induced gastric ulcer. The cytoprotective effect of Pirfenidone and Aliskiren was mainly through their anti-oxidant and anti-inflammatory activity by

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reducing oxidation markers like myeloperoxidase and malondialdehyde, and also reducing inflammatory cytokines like tumor necrosis factor- $\alpha$ .

**Keywords:** Aliskiren, Anti-inflammatory, Antioxidant, Cytoprotective, Gastric ulcer, Malondialdehyde, Myeloperoxidase, non-steroidal anti-inflammatory drugs, Omeprazole, Pirfenidone, Tumor necrosis factor- $\alpha$

## *University of Baghdad*

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<b>Thesis Title</b>	<b>Ultrasonic and Electrophysiological Evaluation of Carpal Tunnel Syndrome in Diabetic and non-Diabetic Subjects</b>			
<b>Year</b>	<b>2022</b>		<b>CD: 1634</b>	
<b>Abstract</b>	<p>Carpal tunnel syndrome is the most well-known and frequent form of median nerve neuropathy and accounts for 90% of all neuropathies. affects 4-5% of the population, especially between the ages of 40-60 years.</p> <p>The prevalence rate is higher among females (9.2%) than among males (6%).</p> <p>Certain risk factors have been reported to be associated with CTS which include medical and occupational factors. The entrapment neuropathy combines phenomena of compression and traction. Nerve compression and traction may cause disorders of the intraneural microcirculation, lesions in the myelin sheath and the axon, as well as alterations in the supporting connective tissue. A nerve conduction study NCS is the simplest method for identifying CTS when combined with a satisfactory clinical and physical assessment.</p> <p>Ultrasound is a beneficial non-traumatic screening approach for CTS</p>			

there is a relationship between the NCS tests and the measures of CSA by ultrasound.

The aim of the study is to evaluate whether or not the electrophysiological

and sonographic observations of the median nerve involvement in CTS seems to be varied between D.M. and non-D.M.

This is a case-control study, conducted at Al-Shaheed Ghazi Al-Hariri teaching hospital, Iraq, Baghdad, in the period from November 2021 to march

2022, which included a total (50) non-D.M. individuals with CTS and (50)

D.M. individuals with CTS. All individuals were submitted to full medical

assessment, NCS testing the nerves, as well as, sonogram US for assessment

of cross sectional area CSA as well as wrist forearm ratio WFR. 100 affected

wrists with CTS are classified as 30 (60.0%) wrists with mild disease, 11 (22.0%) wrists that demonstrated moderate disease and 9 (18.0%) wrists had

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severe disease in diabetic CTS patients and 23 (46.0%) wrist mild disease, 20

(40.0%) wrist show moderate disease, 7 (14.0%) wrist had a severe disease in

non-diabetic CTS patient. The mean of median nerve CSA was (0.14±0.03

cm<sup>2</sup>), (0.15±0.04 cm<sup>2</sup>) in diabetic and non-diabetic CTS individuals

respectively with no significant difference between the two groups. While the

wrist forearm ratio demonstrates a significant difference between the two









groups. CSA demonstrated a positive significant correlation with age in nondiabetic

CTS compare to diabetic CTS (  $r=0.505$ ,  $p<0.001$  ). BMI there is a significant positive correlation in diabetic CTS patient ( $r= 0.529$ ,  $p<0.001$ ).

Each of Median n. distal motor latency in both groups with positive correlation, median n. distal motor amplitude with significant negative correlation in diabetic CTS group ( $r=-0.435$ ,  $p=0.001$ ), and median n. motor

CV with significant negative correlation in diabetic CTS group ( $r=-0.667$ ,  $p<0.001$ ).

In conclusion: The CSA of the median nerve is greater in CTS wrists

	<p>through both D.M. and non-D.M. individuals with no significant difference.  The mean wrist-forearm ratio was less in diabetic patients than in non-diabetic  with a significant difference. Pairing NCS with US imaging gives effective  assessment methods for the CTS hands in individuals with and without diabetes</p>			
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Thesis Title	Evaluation of Cytoprotective Effects of Each of Cilostazol and Trimetazidine on Indomethacin Induced Gastric Ulcer in Rat Model			
Year	2022		CD: 1636	
Abstract	<p>Gastric ulcer is the most common gastrointestinal tract disorder represent about 20% of peptic ulcer occur due to imbalance between gastric defense mechanisms and aggressive factors include mainly <i>Helicobacter pylori</i> and nonsteroidal anti-inflammatory drugs, The clinical features include burning sensation in the chest, bloating, nausea and vomiting, if left without treatment lead to serious complications include perforation, gastric cancer and bleeding that require hospitalization.  Although many treatments have been approved to treat gastric ulcer many researches have been done to evaluate and investigate the cyto-protective effect of some herbals and drugs approved for other uses to protect and treat gastric ulcer.</p>			

#### **Aim of the study**

To evaluate the protective effect of Trimetazidine and Cilostazol on gastric mucosa by assessing histopathological changes, gastric ulcer severity, inflammatory and oxidative stress markers (Tumor necrosis factor- $\alpha$ , myeloperoxidase and Malondialdehyde) in rat model of indomethacin induced gastric ulcer in comparison to Omeprazole.

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##### **Methods**

Fifty of albino male rats divided into five groups each with ten (N=10):

**Group A:** Given Indomethacin s vehicles (normal saline 0.9% and tween 80) orally

via gavage tube and serve as control negative group.

**Group B:** Induced ulcer by Indomethacin 60mg/ kg orally via oral gavage serve as control positive.

**Group C:** Pretreated with standard Omeprazole 20mg/kg via gavage tube 1 hour

before oral Indomethacin 60mg/kg administration.

**Group D:** Pretreated with Cilostazol 10mg/kg orally by gavage tube 1 hour before

Indomethacin 60mg/kg oral administration.

**Group E:** Pretreated with Trimetazidine 50 mg/kg orally by gavage tube 1 hour

before Indomethacin 60 mg/kg oral administration.

After four hours of indomethacin administration rats were sacrificed, a macroscopic examination, histological evaluation and immunohistochemistry

evaluation of gastric mucosa anti-inflammatory and antioxidant markers (Tumor necrosis factor  $\alpha$ , malondialdehyde and myeloperoxidase) were done.

##### **Result:**

Cilostazol 10 mg/kg and Trimetazidine 50mg/kg pretreated groups show a

significant ( $p \leq 0.01$ ) reduction in gastric ulcer severity score and histopathology

damage score in comparison with the indomethacin ulcerated group.

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Moreover; pretreated groups with Cilostazol 10mg/kg and Trimetazidine

50mg/kg showed a significant reduction in pro-inflammatory markers (Tumor

necrosis factor- $\alpha$ ), neutrophil infiltration marker











(Myeloperoxidase) and oxidative stress marker (Malondialdehyde) in comparison with the induction group and similar to the results of the reference drug.

**Conclusion:**  
The current study spotted the light on the cytoprotective activity of cilostazol (phosphodiesterase  $\square\square\square$  inhibitor) and trimetazidine dihydrochloride (3-ketoacyl coenzyme A thiolase inhibitors) on the gastric mucosal injury. Cilostazol (10mg/kg) and trimetazidine (50mg/kg) 1 hour before indomethacin administration show a reduction in the damaging effect of indomethacin, both drugs were equally effective and show similar efficacy as standard omeprazole drug by a decrease in oxidative stress status manifested by a reduction in lipid peroxidation indicator marker (malondialdehyde) as well as reduction in proinflammatory cytokine level (tumor necrosis factor alpha) and neutrophil infiltration indicator marker (myeloperoxidase). Finally, macroscopic and microscopic evaluations show a reduction gastric ulcer severity.

**Key words:** Cilostazol, Oxidative stress, TNF-alpha, Trimethazidine, Malondi aldehyde and Myeloperoxidase

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<b>Thesis Title</b>	<b>Patients with High Grade Glioma, their profile and overall survival</b>			
<b>Year</b>	<b>2022</b>		<b>CD: 1637</b>	
<b>Abstract</b>	<p><b>Background:</b> The tumors of central nervous system represent for less than 3% of all cancers. They are having very specific anatomic, physiological, pharmacological, immunological, and functional considerations, and pose challenges that are unique in all of oncology. Glioblastoma Multiforme is the most aggressive diffuse glioma of astrocytic lineage and corresponds to grade IV based on WHO Classification. Glioblastoma Multiforme remains an incurable disease with a median survival of 15 months.</p> <p><b>Objectives:</b> The study aimed to evaluate patients profile with high grade gliomas, to estimate the survival rates of Glioblastoma Multiforme and to determine the difference between Glioblastoma Multiforme (GBM) and anaplastic astrocytoma (AA) survival rates.</p> <p><b>Methods:</b> A retrospective study of 43 patients treated with radiotherapy, (28 cases Glioblastoma Multiforme) and (15 cases Anaplastic astrocytoma) between (2019-2022). This study was conducted at Baghdad radiotherapy and nuclear medicine center, at Baghdad medical city complex, Baghdad, Iraq. Data were collected retrospectively with view of medical records. The following variables</p>			

were studied: age, sex of patients, site of primary, surgery resection, concurrent chemo radio therapy (CCRT), type of histopathology, radiation dose, constraints doses of organs at risk (OAR), and fractions of radiation, in addition, the follow-up period estimated.









**Results:** In this study, the mean and median age were  $44.63 \pm 12.6$  years and 44 years respectively. Males were (26, 60.5%), whereas females were (17, 39.5%). About 13(30.2%) of tumors were located in frontal, 13(30.2%) in parietal, 7(16.3%) in temporal, 6(14%) in fronto-parietal, 3(7%) in occipito-parietal and one (2.3%) in occipital. Approximately, 23(53.5%) of patients underwent subtotal resection. Out of 43 cases, 30(69.8%) were received CCRT. The overall median of follow-up was 17 months. According to recurrence, only two cases (5.1%) were recurred. The most common dose used was 60GY/30Fx in 31(72.1%) patients. The

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overall median of PTV90% was 97% (mean was  $96.37 \pm 2.43$ ). Whereas, the overall median of PTV95% was 95% (mean was  $93.95 \pm 2.84$ ). There was a high statistically significant difference between two PTVs (t-test= 10.69; 95%CI= 1.962-2.875;  $P < 0.0001$ ). Regard tolerance, brain stem in 21(48.8) cases, pituitary gland in 19(44.8%) cases, optic chiasm in 11(25.6%) cases, left optic nerve, left lens and right lens in one-case for each, and left and right cochlea in two-cases for each, received dose above tolerance. The OS for patients in this study was  $20.37 \pm 1.97$  months (median OS= 18 months, 95%CI;16.51-24.23). There was a statistical significant among parietal site of primary tumor over other sites, which had better OS (24.43 vs. 14.33 months), ( $P = 0.029$ ). In relation to PTV%, the multivariate analysis revealed a better OS of 95%PTV over 90%PTV, without any significant difference (Log rank:  $X^2 = 1.657$ ,  $df = 3$ ,  $P = 0.646$ ).

**Conclusions:.** Young age group are mostly effected to develop HGG. Primary tumors located in parietal lobes have better survival than other sites. Planning of radiotherapy with high volume coverage PTV95% is better than PTV90% without any significant difference. The OS for patients with HGG is  $20.37 \pm 1.97$  months (median OS= 18 months). Gender, age, subtotal resection, RT dose, CCRT, and histology are insignificantly influence survival patients with HGG

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<b>Thesis Title</b>	<b>EVALUATION OF THE EFFECT OF SOFT LASER ON SOME HEMATOLOGICAL PARAMETERS IN PATIENTS WITH BREAST CANCER</b>			
<b>Year</b>	<b>2022</b>		<b>CD: 1638</b>	
<b>Abstract</b>	<p>In spite of the tissue type difference, the Laser is classified as (hard or soft); according to the laser interaction with tissues. Low-level laser therapy (LLLT) is a type of laser medicine used in physical therapy that affects biological processes in tissues. The other names for the Low- Level Laser therapy include cold laser, biostimulation laser, low power lasers (LPL), soft tissue laser, therapeutic laser, and laser acupuncture.</p> <p>This study is designed in vitro to evaluate the effects of soft laser on erythrocytes and some blood parameters such as MCV, and ESR of Breast cancer patients for whole blood and plasma samples. A 8ml of fresh blood samples were collected from breast cancer patients and healthy volunteers by venipuncture into EDTA tubes, these samples were divided into four equal aliquots one as a control (not irradiated), and three others were exposed to three different irradiation time (10, 20, and 30) min and laser doses (60, 120, and 180) J/cm<sup>2</sup> with laser wavelength 532 nm and power density = 100 mW/ cm<sup>2</sup> . The Blood parameters (MCHC, MCV, HCT, RBC count, MCH) are measured by</p>			

using laboratory instrument (Automate hematology analyzer) and the ESR measuring by using the Westergren method.

The result of this study shows that the effects of LLLT having non-significant difference on (RBC count, HGB, MCH, and HCT) of the irradiation of Whole blood samples and plasma samples (for healthy subjects and patients with breast cancer)

Also, the other parameter (MCV, ESR, and MCHC) response to laser with different exposure times showed that had a significant decrease in the MCV and II

ESR values and significantly increased in MCHC in (irradiation of whole blood samples and Plasma samples) for both groups in this study. However, The maximum reduction of the ESR value of Plasma irradiation samples significantly at doses of 180 J/cm<sup>2</sup> at an exposure time of 30 min for both groups in this study (healthy and Breast cancer patients).