University of Baghdad	
College Name	Medicine
Department	Echocardiography
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e-mail	
Career	◌ Assistant Lecturer　◌ Lecturer　◌ Assistant Professor　◌ Professor
	◌ Master　　　　　PhD ◌　　　　Diploma ●
Thesis Title	The Effects of Chronic Cigarette Smoking on the Right Ventricular Functions in Young Male Subjects: A Speckle Tracking Echocardiographic Study
Year	2018
Abstract	Background: Chronic Cigarette smoking is one of the major risk factors for coronary artery disease. However, it has additional cardiac adverse effects independent of coronary atherosclerosis. Objectives of study: To assess the effects of chronic smoking on right ventricular systolic and diastolic functions using Two-Dimensional Speckle Tracking. Patient and methods: This study was carried out in Baghdad Teaching Hospital\ Echo unit from June 2017 to May 2018.The participants whom divided into two groups smoker vs nonsmoker were examined by standard echocardiography protocol which was followed by Two-Dimensional Speckle Tracking to assess the functions of the right ventricle. Results: Forty young smokers' men and 40 age-matched nonsmoking controls enrolled in this study, the baseline characteristics of two groups were similar. There were significant differences regarding the Tricuspid Annular Plane Systolic Excursion ,P (<0.04) which were significantly reduced in smokers group. The peak late diastolic velocity (A wave) were significantly higher in smoker group P (0.016) and hence the E/A ratio were significantly lower P (0.017). The Tissue Doppler Imaging examination of right ventricular free wall reveal that the Peak systolic velocity of RV free wall (S'), and the peak early diastolic velocity of RV free wall (E') were found significantly lower in smokers group when compared to control group (P <0.02 for both). The Global Longitudinal Strain as assessed by 2D- Speckle Tracking Echocardiography were also significantly reduced in smoker group P (0.04). There were significant correlations between the amount of smoking and right ventricular global strain by 2-D Speckle Tracking Echo study.

	Conclusion: This study demonstrated that chronic cigarette smoking causes alterations in long-axis systolic and diastolic functions of right ventricle in healthy young subjects. These changes can be early detected with 2-D Speckle Tracking Echocardiography.

University of Mustansiriyah				
College Name	**Medicine**			
Department	**Microbiology**			
Full name as written in passport	**Shahad Alauldeen Hussein Al-Taie**			
e-mail				
Career	◌ Assistant Lecturer	◌ Lecturer	◌ Assistant Professor	◌ Professor
	● **Master**		◌ **PhD**	
Thesis Title	**Molecular detection of medically important Metallo- β-lactamases produced by multi-drug resistant *Pseudomonas aeruginosa* and *Klebsiella pneumonia*.**			
Year	**2019**			
Abstract	*P.aeruginosa* and *K. pneumonia* were positive for this test when they were exposed to Imipenem alone plus Imipenem-EDTA and Meropenem alone plus Meropenem-EDTA at the same time. The remaining 18 (53.0%) were positive in the presence of Meropenem plus Meropenem-EDTA but at the same time, they were negative when they were submitted to Imipenem plus Imipenem+EDTA. Results revealed that out of 27 *P.aeruginosa*-Positive isolates for MBL, 26 (96.0%) were confirmed as MBL OXA-carbapenemases producer isolates while one (4.0%) had no expression for these MBL genes. On the other hand, our result showed that all isolates 7 (100%) of *K.pneumonia*e were produced MBL OXA-carbapenemases. No expression for class-A *Klebsiella pneumonia*e carbapenemase (KPC) was observed against *P. aeruginosa* and *K. pneumonia*e. Results also revealed that out of 27 clinical isolates of *P.aeruginosa* which were positive for MBL, 25 (93.0%) were confirmed as Verona integron-encoded-Metallo-β-lactamase (VIM) producer isolates, while Two (7.0%) of these isolates were not expressed

VIM encoded genes. Furthermore, all isolates 7 (100%) were confirmed
as MBL (VIM) against *K. pneumonia*e producer isolates. No gene expression for imipenemase-Metallo-β-lactamase (IMP) against *P. aeruginosa* and *K. pneumoniae* was observed in this study. Further, out of
27 *P.aeruginosa* positive isolates for MBL, 21 (78.0%) were confirmed as MBL New Delhi Metallo-β-lactamase (NDM) producer isolates while
Six (22.0%) exhibited no expression for these MBL genes. Additionally results revealed that out of Seven *K. pneumoniae* positive isolates for MBL, Six (86.0%) were confirmed as MBL New Delhi Metallo-β-lactamase (NDM) producer isolates. The study suggests that Meropenem
was a potent and strong predictor for the reliability of phenotypic confirmatory results in Iraq, while imipenem was considered as a poor screening agent for MBL detection. Combined disk test is more preferred
III
than double-disk synergy test for phenotypic confirmatory test for checking carbapenemases production. Gene expression wasn't found for
KPC and imipenemase encoding genes for study isolates. Co-production
of *bla*VIM and *bla*OXA-48 encoding genes was produced by all study isolates
of *K. pneumoniae*. The same event was appeared by this bacterium (Coproduction)
for *bla*VIM, *bla*OXA-48, and *bla*NDM encoding genes. Finally, coproduction
of *bla*VIM and *bla*NDM carbapenemase was observed clearly by most study isolates of *P. aeruginosa*.

University of Baghdad	
College Name	**Medicine**
Department	**Echocardiography.**
Full name as written in passport	**AHMED BASHEER MAHMOOD**
e-mail	
Career	⦂ **Assistant Lecturer** ⦂ **Lecturer** ⦂ **Assistant Professor** ⦂ **Professor**
	⦂ **Master** **PhD** ⦂ **Diploma** 🟣
Thesis Title	**RELATIONSHIP p OF THE LEVEL OF N TERMINAL PRO-BNP WITH CORONARY ARTERY DISEASE CLINICAL AND ANGIOGRAPHIC EVALUATION**
Year	**2018**

| Abstract | **B-type natriuretic peptide (BNP) have been used to identify patients with congestive heart failure (CHF) and independent predictor of sudden cardiac death. Few studies identified the significance of Pro-N-BNP in patients with separated entities as IHD without heart failure.**
 Purpose:
 to determine the value of N-terminal pro-Brain Natriuretic Peptide (NT-proBNP) in patients with ischemic heart disease and its relationship to the severity and the number of coronary artery involved..
 Patients and Methods:
 One hundred and sixty two patients (162) (107 male and 55 female) with suspected coronary artery disease referred to our catheterization lab at Iraqi center for heart diseases for coronary angiography between JANUARY - July2018 were subjected to measurement of the blood NT pro BNP level at the date of coronary angiography. All the patients underwent full clinical evaluation, echocardiography as being assessed by conventional echocardiography and TDI.
 The patients were classified into two groups according to the angiographic findings:
 group I had normal coronary angiography , fifty eight(58) patients and group II had significant coronary artery disease on hundred and four(104) patients. The patients with coronary artery disease (group II) were further sub divided according to the severity of coronary artery lesion to
 II a : who have critical lesion(70-90% stenosis),
 II b: those with subtotal occlusion(90-99%) and
 II c those with total 100% occlusion.
 Group II was further subdivided into :
 IIA2: the patients with significant coronary lesion and have normal left ventricula systolic and diastolic function |

II B2 : the patients with significant coronary lesion and have abnormal systolic and/or diastolic function.

Results:

While there was no statistically significant difference between group I (control group) and group II (patient group) regarding the demographic variables, the blood NT pro BNP level was significantly higher in group II. It ranged from 17 to 362.5 pg/ml with a mean ± SD of 74.68±33.92 in group Iin comparison to with a mean ± SD of 1199.97±569.58 then we study statistic relationship of each subgroup with level of N- terminal pro- BNP by one way and two wayANOVA TEST.

There was staistiacl significant relation between the level of po BNP ad the severity of coronary artery stenosis (IIa,II b,IIc) . p value= 0.00001. The Receiver-Operating Characteristics (ROC) curve showed that cut off point of NT pro BNP level for predicting CAD is > 15 Pg/mL with sensitivity 79.4% and specificity 77.3 %. .There was also singnicant elation between po BNP and the number of vesssel involved (single vessel esult , two vessel result , three vessels result) p value=0.02.When we compare the relation of por BNP level ant left venticula fucntions (systolic and diastolic) we find a significant assosciation between the level of pro BNP and coronary artery lesion e in patient with normal systolic and diastolic functions p value = 0.001

Conclusion:

In patients with IHD with or with out LV functions (systolic and diastolic), measurement of the NT-proBNP blood level is a useful tool for prediction and assessment of the severity of CAD. - 2 -

University of Baghdad			
College Name	Medicine		
Department	Philosophy of Clinical Biochemistry		
Full name as written in passport	Aseel Nabeel Kamil		
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Career	◌ Assistant Lecturer	◌ Lecturer	◌ Assistant Professor	◌ Professor
	◌ Master		● PhD	
Thesis Title	Plasma Concentrations and Diagnostic Utility of Vascular Endothelial Growth Factor (VEGF), Matrix Metalloproteinase-2 (MMP-2),Tissue Inhibitors of Metalloproteinase-2 (TIMP-2), and Macrophage Colony Stimulating Factor (M-CSF) in Women with Breast Tumor: A Comparative study with CA 15-3		
Year	*2018*		

Abstract

Background:

Breast cancer (BC) is the most common malignancy in women and the second leading cause of their death from cancer in the world. The most effective way to combat cancer is its prevention and early detection.During the last decade, biochemical markers of breast cancer have attracted the attention of many researchers. Among these biomarkers, the interest points to Vascular Endothelial Growth Factor (VEGF), Macrophage Colony Stimulating Factor (M-CSF), Matrix Metalloproteinase-2 (MMP-2), Tissue Inhibitors of Metalloproteinase-2 (TIMP-2).Growing evidence indicates that measurement of VEGF maybe the best candidate for BC diagnosis (better than CA 15-3) especially in stages I and II as well as in the differentiation between BC and benign breast tumor. More recently it has been reported that TIMP-2 maybe useful in early diagnosis ofBC and differentiation of breast cancer stages.

The aim of this study are to: (1) Measure the plasma concentrations of some of new biomarkers including: Vascular Endothelial Growth Factor (VEGF), Matrix Metalloproteinase-2 (MMP-2), Tissue Inhibitor of Metalloproteinase-2 (TIMP-2) and Macrophage-Colony Stimulating Factor (M-CSF) in addition to CA 15-3 in women patients with breast tumor in compare son with healthy control women, (2) Investigate the diagnostic utility of each of the measured biomarker (and in combination with each other) in detection of breast tumor and (3) Correlate the findings with the clinicopathological parameters (age, menopause, marital status, stages, tumor size, Estrogen Receptor (ER), Progesterone Receptor (PR) and Her-2/neu receptor) in those patients.

Subjects and Methods:

Eighty-eight Iraqi women were enrolled in the study; 38 women with primary breast cancer (BC, Group I), 25 women with Fibroadenoma (FA)benign breast tumor (FA, Group II) and 25 apparently healthy women (served as control group). The diagnosis of breast tumor was achieved by the Oncology group. Histopathology investigations were performed by Consultant Histopathologic based on tissue biopsy of mammary tumor or after mastectomy. Tumor classification and staging were performed depending on criteria of International Union against Cancer Tumor-Node-Metastasis (UICC-TNM) classification and the American Joint Committee on Cancer Staging. Accordingly, women with breast cancer were classified into subgroups based on the stage of their BC; Group A: 12 women with stage I, Group B: 14 women with stage II, and Group C: 12 women with stage III. Exclusion criterion includes those women with breast cancer of advanced stage (stage IV), a previous history of multiple type of cancers; female reproductive tract cancers (ovarian, cervical and endometrial cancers), renal, colorectal, pancreatic, lung, head and neck tumors. Blood sample was aspirated from each woman for the measurement of plasma VEGF, M-CSF, MMP-2, TIMP-2 and serum CA15-3 by using enzyme linked immunosorbent assay (ELISA). Also, serum vitamin D3was measured in group I only using ELISA and serum lipid profile parameters were measured in group I and group II.

Results:

The mean (±SD) values of plasma levels of VEGF (p<0.001), MMP-2 (p< 0.001), TIMP-2 (p < 0.001), M-CSF (p < 0.05), and CA 15-3 (p<0.001) of group I was significantly higher compared to that of group II and controls.

However, the mean value of plasma MMP-2 was the only measured biochemical marker which was significantly increased in group II compared to controls (p<0.001). Regarding the BC stages, the mean values of all the measured biochemical markers were significantly higher in stage III than in stage I and stage II (p<0.001). Interestingly, the mean (± SD) value of plasma TIMP-2 levels was the only biochemical marker of the measured ones which was significantly increased in stage II than in stage I (*p*=0.001). The cut-point value of plasmaVEGF (>55.73 pg/ml) or TIMP-2 (>102 ng/ml) (for both, AUC=1.0) was the excellent test in differentiating women with stage I of BC from healthy women. While that of VEGF (>55.73 pg/ml), TIMP-2 (>102 pg/ml) or CA15-3 (>10.82 u/ml) (for all, AUC=1.0) was considered as the best test in discriminating the BC stage II from healthy women. While, the cut-point value of plasma TIMP-2 (>142 ng/ml) which has the highest (AUC=1.0) considered as the excellent test in differentiating BC stage I from women with fibroadenoma benign tumor (FA). While that of VEGF (>88.67 pg/ml) or TIMP-2 (>254 ng/ml) which has the highest (for each, AUC=0.991) was

considered as the best test in discriminating the BC stage II from FA. In addition, the plasma measurement of VEGF has the superior diagnostic utility in differentiation of FA women and healthy control women (p<0.001, AUC=0.998).

Conclusion:

Measurement of plasma VEGF (cutoff >55.22pg/ml) or TIMP-2(cutoff >102 ng/ml) is the best biochemical marker in diagnosis of stage I or stage II BC and differentiates them from healthy women; they have more diagnostic utility than CA 15-3.

Also, measurement of TIMP (cutoff > 142 ng/ml) has the excellent diagnostic utility in diagnosis and differentiation of stage I BC from benign tumor fibroadenoma (FA). Moreover, TIMP-2 (cutoff > 254 ng/ml) or VEGF (cutoff > 88.67 pg/ml) has the superior diagnostic utility over that of CA 15-3 in diagnosis and differentiation of stage II BC from FA. Plasma measurement of TIMP-2 was the best biochemical marker in studying early progression of BC; it can differentiate stage II from stage I BC. Furthermore, plasma measurement of VEGF was found to be the excellent parameter in differentiation between women with FA from healthy ones.

University of Diyala	
College Name	Medicine
Department	Fulfillmentof
Full name as written in passport	Saif Hakeem Tofiq
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Career	⦂ Assistant Lecturer ⦂ Lecturer ⦂ Assistant Professor ⦂ Professor
	🔵 Master ⦂ PhD
Thesis Title	Comorbiditiesof Phototherapy Used in Neonatal Jaundice in Diyala Governorate-Iraq.
Year	2018
Abstract	Neonatal jaundice is the yellowish discoloration of the sclera and skin caused by hyperbilirubinemia, it is one of the most common conditions confronting neonatologists daily.It's a serious condition that may result in fatal complications if not treated properly and in a timely manner. This condition is caused by an excess of bilirubin in the blood, a yellow substance created from the degradation of red blood cells. Bilirubin is broken down by the liver and binding to albumin and being excreted as bile. Neonates in the first few days after birth produce 6 to 8 mg/kg/24h, more than twice as much as adults. To assess the comorbidities in neonate, of phototherapy used in treatment of neonatal jaundice. A cross sectional study conducted at Al-Batool teaching hospital for maternity and child in Diyala governorate Iraq. The period started from the 1st of Aug. 2017 to the 1st of Jan. 2018. Onehundred neonates with jaundice need for treatment with phototherapy was included in the current study. The mean age of neonates was 2.6±2.3 days; 64% of them were less than 3 days age. Seventy tow percent of neonates with jaundice were delivered by NVD. Resuscitation was done for 56% of neonates while 48% of them were directly admitted to NICU. The common type of maternal infection was UTI 44%.The skull bone changes of neonates with jaundice by x-ray were found for 52% of them. Mean birth weight of neonates with jaundice was 3.3±0.82 Kg, while after phototherapy was 3.2±0.79 Kg, with significant reduction after phototherapy (p<0.001).Exchange transfusion was done for 17% of neonates and repeated in 8% of them. ABO differences in blood groups were detected in 51% of neonates with jaundice and RH differences were detected in 28% of them. The common co-morbidities after phototherapy were skin rash 89%, bronze baby syndrome 2.0%, dehydration 51%, diarrhea 46%, eye injury 16%, eye trauma 9% and thrombocytopenia 2%.

	More than half of the babies were suffering from one or more co-morbidities after treatment with phototherapy. The majorities were suffering from skin rash, dehydration, diarrhea and eye injury.

	University of Diyala		
College Name	**Medicine**		
Department	**Pediatrics**		
Full name as written in passport	**Ali AmmerAbd**		
e-mail			
Career	⬡ Assistant Lecturer	⬡ Lecturer	⬡ Assistant Professor ⬡ Professor
	⬡ Master		⬡ PhD
Thesis Title	**Anemia in children, the prevalence and contributing factorsin Al-Batool Teaching Hospital / Diyala Governorate**		
Year	**2018**		
Abstract	Anemia is a global public health problem, with important consequences for human health , social and economic development of each nation. It results from single or multiple causes that act simultaneously, influencing children's health, their cognitive and physical development, and immunity, increasing the risk of infections and infant mortality. Anemia is defined as a hemoglobin (Hb) concentration two standard deviation below the mean Hb concentration for a normal population of the same gender and age range. To assess the prevalence of anemia in children and its contributing factors under 5 years old in Diyala/Iraq A cross sectional study was conducted at Al-Batool teaching hospital for maternity and childrenduring the period from the first of August 2017 to the first of January 2018. Five hundreds of children from the 6 months to 5 years old were included in the current study.The data collected by special questioning sheet. The information was taken from the mother of the child or a relative accompanying, which included the name and age of the patient, the gender of the patient, sequence of the child in the family and the factors that affect the rate of anemia in childrenlike exclusive breastfeeding in first 6 months of life, weaning, birth weight, premature birth, family history of anemia and its type, consumption of tea in children, intestinal worm, source of water supply,educationallevel of parents, and socio – Economic level of the family. The percentage of anemia in the studied sample was 28.4% , from

which 73.5% was iron deficiency anemia , 1.1% was thalassemia major and intermedia, 4.4% was B-thalassemia trait and 21% other types of anemia (anemia of chronic disease like renal and liver diseases, Bone marrow failure , hemolytic anemia , anemia after blood loss , vitamin B12 and folate deficiency and a plastic anemia.

There is a highly significant association between anemia and artificial feeding , prolonged breast feeding , tea consumption , worm infestations , absence of prenatal care , low birth weight , low parental education and low wealth index.

Thereis a significant association between anemia and male gender , rural residency and positive family history of anemia.

Anemia still represents a major health problem in children under 5 years in Diyalawith prevalence of 28.4% , most of them (73.5%) was iron deficiency

Children, Anemia, Prevalence, Contributing factors, Diyala.

University of Baghdad	
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Career	◌ Assistant Lecturer ◌ Lecturer ◌ Assistant Professor ◌ Professor
	◌ Master PhD ◌ *Diploma* ●
Thesis Title	Evaluation of RV functions in ASD patients pre & post transcatheter occlusion by speckle tracking
Year	2018

Abstract

Background: The atrial septal defect is a common congenital heart disease. Speckle tracking echocardiography is non-invasive diagnostic technique used in assessment of myocardial function.

Aim of study: To evaluate the feasibility and reproducibility of right ventricular 2D Strain assessed by speckle tracking in patients undergoing atrial septal defect transcatheter occlusion compared with conventional markers before and after transcatheter occlusion.

Patients and methods: A prospective follow up study conducted in Ibn AL-Bitar Specialized Center for Cardiac Surgery in Baghdad during the period from 1st of July, 2017 to 30th of June, 2018 on sample of 30 patients with atrial septal defect and sample of 30 healthy controls. All patients were investigated with echocardiography and speckle tracking one month before transcatheter occlusion and one month after the transcatheter occlusion.

Results: Post transcatheter occlusion, there was a significant decrease in mean right ventricular end diastolic dimension ($p<0.001$) and a significant decrease in mean of tricuspid annular plain systolic excursion ($p<0.001$). There was a significant increase in global strain speckle tracking echocardiography mean post transcatheter occlusion ($p<0.001$). The global strain speckle tracking echocardiography mean was significantly higher among controls and atrial septal defect patients in post occlusion while lower among patients in pre-occlusion ($p<0.001$) with no significant difference in global strain mean between controls and patients in post occlusion ($p=0.1$).

Conclusions: The speckle tracking echocardiography is a valuable diagnostic technique for evaluation of right ventricular function before

	and after transcatheter occlusion of atrial septal defect in adults. Keywords: Atrial septal defect, Speckle tracking defect, Right ventricular function.

University of Baghdad	
College Name	**Medicine**
Department	**Clinical Biochemistry**
Full name as written in passport	**Nawar Sameer Mohammed**
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Career	◌ **Assistant Lecturer** ◌ **Lecturer** ◌ **Assistant Professor** ◌ **Professor**
	◌ **Master** ● **PhD**
Thesis Title	**Thiopurine S-Methyltransferase Phenotype and Genotype in a Sample of Iraqi Children with Acute Lymphoblastic Leukemia**
Year	**2018**
Abstract	**Background: The most common childhood cancer is acute lymphoblastic leukemia which is only treated with chemotherapy alone.** **All modern protocols of acute lymphoblastic leukemia treatment used thiopurine drugs as an essential anti-cancer drug which used for a long period of time. The 6-Mercaptopurine is an anti-cancer drug widely used for treating acute lymphoblastic leukemia patients. The patients with low Thiopurine S-Methyltransferase enzyme activity is with an increased risk of developing drug toxicity and consequently unsuccessful acute lymphoblastic leukemia outcome and even death. Thiopurine S-Methyltransferase is one of the main enzymes involved in 6-mercaptopurine metabolism, and the low activity of this enzyme is strongly correlated to the Thiopurine S-Methyltransferase genetic polymorphism.** **Aim: Find out the three most common Thiopurine S-Methyltransferase enzyme polymorphism TPMT*3A, TPMT*3B and TPMT*3C in Iraqi pediatric patients with acute lymphoblastic leukemia, and its frequencies. Analyses of Thiopurine S-Methyltransferase activity in the serum of those patients, and compare the results with other population.**

Methods: This is a cross-sectional study included eighty-one (81) Iraqi pediatric patients with acute lymphoblastic leukemia during the maintenance phase of their UKALL protocol treatment, receiving 6-Mercaptopurine drug with age range from 1.83 (1year and 10 months) to 16.25 (16 years and 3 months). Thiopurine S-Methyltransferase Abstract III

activity was measured in the patients' serum by Enzyme-Linked Immunosorbent Assay technique and three of Thiopurine SMethyltransferase

genetic polymorphisms were detected by allelespecific multiplex-PCR analysis after DNA extraction from the whole blood. Liver Function Tests were measured by calorimetric method; Alanine Aminotransferase, Aspartate Aminotransferase, Alkaline Phosphatase and Total Serum Bilirubin in addition to Complete Blood Count measured by automated hematology system.

Results: There was significant difference in the mean of Thiopurine S-Methyltransferase activity between pediatric patients carrying the wild-type allele TPMT*1 (n=49), with allele frequencies of 60.4% and pediatric patients (n=32) carrying the mutant alleles (TPMT*3A or TPMT*3C) with allele frequencies of 81.2% and 18.7% respectively. The TPMT*3B allele was not detected in this group. The P-value was highly significant (P<0.000**).

Conclusion: This study is the first to analyze Thiopurine SMethyltransferase

mutant gene frequency in a sample of the Iraqi

population, and it revealed the presence of TPMT*3A and TPMT*3C genetic polymorphism but not a TPMT*3B mutant allele. Thiopurine S-Methyltransferase activity was low in the patients with mutant gene as compared with the wild-type allele patients. Finally, genotype and phenotype of Thiopurine S-Methyltransferase enzyme is an essential predictor to reduce the cytotoxic effects of the anticancer drug and successful acute lymphoblastic leukemia treatment

University of Baghdad	
College Name	**Medicine**
Department	*Family Medicine*
Full name as written in passport	*Fatima Mohammed Hassen*
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Career	⚬ Assistant Lecturer ⚬ Lecturer ⚬ Assistant Professor ⚬ Professor
	⚬ **Master** PhD ⚬ *Board* 🟣
Thesis Title	**Workplace violence against primary and secondary schools teachers in Al-Najaf Al-Ashraf government: A cross sectional study**
Year	**2017**
Abstract	**Teachers are the significant adults providing students with knowledge and a safe environment for social and psychological development, they are expected to be role models for school children and responsible for protecting students from harm as well as promoting student well-being, inexplicably, sometimes teachers are targets of violence committed by their students during school hours.** **Objectives:** **To measure the prevalence of violence against teachers, to compare the prevalence of violence between male and female teachers, rural and urban area, primary and secondary schools and to compare the prevalence of violence according to subject that they teaches.** **Subjects and Methods:** **A cross- sectional descriptive analytic study the sample of 308 teachers who working in the primary and secondary school in AL-Najaf AL-Ashraf governorate, The time of this study was over 10 months beginning from 1st of April 2017 to 1st of February 2018,Before the collection of data the official agreement were taken from the general educational directorate in Al –Najaf Al-Ashraf governorate and from the managers of schools and teachers , Practically, prior to distribution of questionnaire, the researcher interviewed the teachers in the school to explain the aim of the research and how to fill the questionnaire and responded to any question from them,the questionnaire containinginformation about demographic factors and containing question about ,verbal ,physical ,psychological, virtual during the last 12 months .The information was analyzed using (spss)version 20.** **Results:** **The prevalence of violence against teacher was 24.7%,the verbal violence is the commonest type of violence followed by physical and object damage (16.6%,6.5% and 5.8% respectively). Then were no**

significant statistical association between violence and gender , local of school and type of school.

Conclusions:

The female teachers exposed to violence more than male teachers ,the violence in the primary schools more than the secondary schools ,the teachers works in the urban schools exposed to violence more than the rural schools ,the teachers that teaches Arabic more exposed to violence than the math and English ,the verbal violence is the commonest type of violence.

University of Baghdad	
College Name	**Medicine**
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Career	◌ Assistant Lecturer ◌ Lecturer ◌ Assistant Professor ◌ Professor
	◌ **Master** PhD ◌ *Board* 🔵
Thesis Title	**Evaluation of The Modified Distally Based Perichonderio-Adipo-Dermal flap Technique for treatment of Prominent Ear Deformity**
Year	**2018**

Abstract

   Prominent ear is a common congenital deformity .Many operative procedures used to correct this condition which mean no single method has been adopted. Some of these procedures adopt cartilage cutting technique while the others preserve the cartilage .Children with prominent ear may be concerned major psychological problem . Recently otoplasty is considered as corrective surgery for pre-school age children to get rid them from social embarrassment .

Aim

To evaluate of the modified Distally Based Perichondrio –adipo-dermal flap Technique forreconstruction of prominent ear.

Patients and methods

Eleven patients(21 ears), were involved in this prospective study at AL -Shaheed Ghazi AL Hariri hospital and Sulaymaniyah Burnand Plastic Surgery Hospital between March 2017 to December 2017.We excluded the patients who had previously operated on (recurrent cases) and Patients with combined congenital auricle deformity.modified Distally Based Perichondrio –adipo-dermal flap Technique was used as a cartilage sparing technique for correction of prominent ear deformity.

ResultsAs a subjective perception and according to visual analogue scale ,most of our patients or their parents were satisfied with final results. Apart from one case of recurrence, no major complications was were seen.

Objectively, set back of the prominent ear was reached acceptable value.

Conclusion

modified Distally Based Perichondrio –adipo-dermal flap Technique flap for correction of prominent ear deformity is simple and provide

	promising aesthetic outcome with minimal drawbacks,except those patients with deep concha . Key words : Perichondrio –adipo-dermal flap,prominent ear deformity, cartilage sparing technique.

University of Baghdad				
College Name	Medicine			
Department	Family Medicine			
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e-mail				
Career	⦙ Assistant Lecturer	⦙ Lecturer	⦙ Assistant Professor	⦙ Professor
	⦙ Master		PhD ⦙	Board 🟣
Thesis Title	*Local complications with the cosmetic application of botulinum toxin among Iraqi female in Baghdad city*			
Year	2018			
Abstract	Botox is the most common cosmetic procedure performed that is minimally invasive relatively easy and quick to administer. The current study aimed to find the prevalence of local complications of botox injection and the correlation of each complication with demographic data . A cross sectional study was carried out from 1/3/2017 to 1/10/2017 in three private clinics in Baghdad city using a questionnaire for female patients aged 30-65 and all available records for patients with botox injections during the last three years 2014, 2015, and 2016. Among 178 patients, 38.8% were in the age group 41-50, and 32.6% were among the age group 51-60. More than 90% of the candidates were both married or ever married, 50.6% were with secondary educations or less and only 30.3% were working females. The commonest complications were pain in 54.5% of candidates and were higher among women in age group (41-50) followed by redness in 14% which were more frequent among younger age group ≤ 40, then swelling in 10.7%, lid ptosis in 3.9%, asymmetrical smile in 2.8%,

	brow ptosis 2.2%, ecchymosis 1.1% and infection 0.6%. Diplopia was not reported.

	University of Baghdad	
College Name	Medicine	
Department	*Pediatrics*	
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Career	◌ Assistant Lecturer ◌ Lecturer ◌ Assistant Professor ◌ Professor	
	🔘 Master	◌ PhD
Thesis Title	**RELATIONSHIP OF FEBRILE CONVULSION WITH SERUM SODIUM AND HEMOGLOBIN LEVEL**	
Year	**2018**	
Abstract	**Febrile convulsions are the most common form of childhood convulsions, affecting 2% to 5% of children. It usually occurs in children below five years of age, associated with fever (temperature ≥ 100.4 °F or 38 °C) but without evidence of intracranial infection or defined cause. Although the prognosis is usually benign however, many factors increase convulsion risk have been identified. After an initial febrile convulsion, there is a 15 - 70% risk of recurrence in the first two years and the risk is increased in patients younger than 18 months and those with a lower fever, short duration of fever before convulsion onset, or a family history of febrile convulsions.** **Since studies on febrile convulsions are rare, this case-control study was conducted in Diyala province to investigate the changes in the complete blood count indices and certain biochemical parameters; namely, serum iron, ferritin, total iron binding capacity and serum sodium in patients with febrile convulsions compared to age_and sex _matched healthy children. Furthermore, the study aimed to explore the association of febrile convulsions with patient's and mother's characteristics.** **A total of 200 children aged six months to six years were included. One hundred were patients with febrile convulsion (patient group) and the other one hundred were apparently healthy (control group). A questionnaire form was specially designed and filled by each subject incluing all required information. Three milliliters of venous blood were drawn from each participant. One milliliter was placed in EDTA**

tube for determination of CBC as quick as possible. The two milliliters were placed in plane tubes. These were left to clot for 15 minutes at room temperature. Sera were separated by centrifugation at 5000 RPM for five minutes. Sera were used for determination of biochemical parameters. Human privacy was respected by taking the parent's consent. Statistical analysis was done using the SPSS Version 25, and P-value was considered significant wherever it is < 0.05.

The results showed that 99% of fit were a generalized type and 95% of them lasted for < 15 minutes and occurred irrespective of day or night (51% *versus* 49%). Furthermore, 90% of patients have no febrile convulsion attack during hospital stay and 78% have no previous fit at all. Moreover, the cause of fever in patients was found due to respiratory cause in 84% 7

and non-respiratory cause in 16% of patients. The fever duration before fit lasted for 12 hours or less in 82% of patients compared to 18% of patients who had fever duration more than 12 hours. Furthermore, 82% of patients had a temperature of 39 or more Celsius at the time of admission while 18% had a temperature of < 39 Celsius at the time of admission.

Regarding the CBC, the results showed that there was a statistically significant increase in the means ± SD of total red blood corpuscles in the controls compared to patient (4.76 ± 0.43 *versus* 4.61 ± 0.51, P= 0.032). Likewise, there was a statistically significant increase in the hemoglobin concentration in controls versus patients (11.85 ± 0.9 *versus* 11.38 ± 1.22, P= 0.003). The packed cell volume was also found to be significantly higher among controls versus patients (37.67 ± 5.7 *versus* 34.07 ± 3.18, P= 0.001). However, the mean corpuscles volume was significantly higher in controls compared to patients (78.01 ± 5.42 *versus* 74.06 ± 8.19, P= 0.001). The red distribution width was significantly higher in patients compared to controls (14.73 ± 1.85 *versus* 13.51 ± 1.08, P= 0.001). while, the difference in the mean corpuscles hemoglobin was insignificantly higher among patients compared to controls (25.58 ± 5.62 *versus* 25.06 ± 2.35, P= 0.396).

As the biochemical parameters are of concern, it was found that the serum iron was significantly reduced in patients compared to controls (4.02 ± 2.38 *versus* 4.74 ± 1.31, P= 0.008). Similarly, the serum ferritin was significantly lowered in patients compared to controls (46 ± 24.61 *versus* 58.58 ± 15.28, P= 0.001). The total iron binding capacity was significantly increased in patients versus controls (80.84 ± 14.51 *versus* 66.12 ± 11.96, P= 0.001). while the serum sodium was also significantly reduced in patients compared to controls (131.11 ± 3.27 *versus* 139.89 ± 8.38, P= 0.001).

Regarding the duration of fit, the results revealed that none of CBC indices and the biochemical parameters significantly differed among patients with duration of fit of 15 minutes or less versus those with 15 minutes or more duration. Likewise, none of the CBC indices as well

as biochemical parameters significantly differed in those patients who had secondary attack of fit during hospitalization compared to their negative counterparts.

The results also showed that none of the CBC indices was significantly changed among patients with a temperature less than 39 Celsius compared to those who had a temperature of 39 or more Celsius. However, regarding the biochemical parameters, it was found that the serum iron and serum ferritin were significantly lowered in patients with temperature of 39 8

Celsius or more compared to those with a temperature of less than 39 Celsius. (3.1 ± 2.47 *versus* 4.48 ± 1.86, t-test = 2.145, P = 0.05) and (32.34 ± 67.58 *versus* 64.9 ± 13.06, t-test = 3.954, P= 0.001) respectively. Besides, the duration of fever was found to have insignificant effect on CBC indices and biochemical parameters in patients who had less than 12 hours' duration of fever versus those who had 12 hours or more duration of fever.

In general, it was concluded that the laboratory determinations of complete blood counts, as well as, serum iron, ferritin, total iron binding capacity and serum sodium as biochemical parameters are of vital importance in the assessment and evaluation of children with febrile convulsion.

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Thesis Title	**Causes of Meningitis in Children in Al- Batool Teaching Hospital / Diyala Governorate/ Iraq.**
Year	**2018**
Abstract	Meningitis is a devastating disease that requires a high index of suspicion, prompt diagnosis, and rapid treatment. Differentiating bacterial from nonbacterial meningitis is very important in deciding treatment. To identify the causative agent of meningitis in children aged<15 year's old in Al-Batool Teaching Hospital / Diyala Governorate / Iraq. A descriptive study conducted in Al-Batool Teaching Hospital, Diyala, Iraq during a period from 1st October 2017 to end February 2018. It included all patients aged <15 years' old who admitted with primary diagnosis of meningitis, presented with clinical signs of meningitis, with total number of patients enrolled were 70. Patients aged >15 years, with operated hydrocephaly, those diagnosed as posttraumatic meningitis and the patients refused lumbar puncture were excluded in this study. Needed information was collected from each patient by a questionnaire designed by the researcher. All patients were subjected to a detailed history , clinical examination , a laboratory and radiological investigation. Blood and Cerebrospinal fluid samples were collected to confirm the diagnosis of meningitis and to differentiate bacterial from viral type. Also investigation such (CBC, Human coxsackievirus A16 (CVA16) antibody (IgM), and High sensitivity C-Reactive protein were performed for all patients. The mean of age of study sample was 39.51 ± 41.43 months; 57.1% were males; 54.3% were living in urban area and 57.1% of them were vaccinated completely. Fit was presented in 45.7% of study patients,

Meningitis is a devastating disease that requires a high index of suspicion, prompt diagnosis, and rapid treatment. Differentiating bacterial from nonbacterial meningitis is very important in deciding treatment.
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Al-Batool Teaching Hospital / Diyala Governorate / Iraq.
A descriptive study conducted in Al-Batool Teaching Hospital, Diyala, Iraq during a period from 1st October 2017 to end February 2018. It included all patients aged <15 years' old who admitted with primary diagnosis of meningitis, presented with clinical signs of meningitis, with total number of patients enrolled were 70. Patients aged >15 years, with operated hydrocephaly, those diagnosed as posttraumatic meningitis and the patients refused lumbar puncture were excluded in this study. Needed information was collected from each patient by a questionnaire designed by the researcher. All patients were subjected to a detailed history , clinical examination , a laboratory and radiological investigation. Blood and Cerebrospinal fluid samples were collected to confirm the diagnosis of meningitis and to differentiate bacterial from viral type. Also investigation such (CBC, Human coxsackievirus A16 (CVA16) antibody (IgM), and High sensitivity C-Reactive protein were performed for all patients.

The mean of age of study sample was 39.51 ± 41.43 months; 57.1% were males; 54.3% were living in urban area and 57.1% of them were vaccinated completely. Fit was presented in 45.7% of study patients,

most of these fits were generalized in type (93.8%) and 56.3% of them were lasted for less than 15 minutes. The main cause of meningitis that detected by Cerebrospinal fluid result was viral cause (74.3%) and Coxsackie virus A16 IgM antibody was detected in 70% of cases. Age and duration of fever were significantly associated factors with cause of meningitis (P = 0.024 and p = 0.017 respectively).

About three quarters of cases of meningitis in Al-Batool Teaching Hospital/Diyala Governorate /Iraq were caused by viral infection and Coxsackie virus A16 IgM antibody was the most common virus detected. The associated factors with viral meningitis were young age and short duration of fever. It was noticed that CSF protein was significantly higher in bacterial than in viral meningitis.

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Thesis Title	ASSESSMENT OF SERUM URIC ACID AND HIGHLY SENSTIVE C-REACTIVE PROTEIN WITH ACUTE NEONATAL RESPIRATORY DISTRESS SYNDROME
Year	2018
Abstract	Acute respiratory distress syndrome is a disease of acute onset characterized by hypoxemia .It infiltrates on chest radiographs.Among preterm infants; it is typically due to a quantitative deficiency of pulmonary surfactant. Aside from the degree of prematurity, diverse environmental and genetic factors can affect the development of respiratory distress syndrom.In premature infants, Respiratory distress syndrom develops because of impaired surfactant synthesis and secretion leading to atelectasis, ventilation-perfusion inequality, and hypoventilation with resultant hypoxemia and hypercarbia. Thus, clinically presents as tachypnea, nasal flaring, retractions, and grunting and may progress to respiratory failure. Mortality rates range from 30% to 75%, and most deaths are a consequence of multiorgan failure. Uric acid acts as both pathogenic inflammatory mediator and an ant oxidative agent correlates with the incidence, severity, and prognosis of pulmonary diseases. C-reactive protein , on the other hand, is an acute-phase protein of hepatic origin and found in blood plasma, whose levels rise in response to inflammation, infection and tissue damage. The association between serum uric acid and C-reactive protein levels and Acute respiratory distress syndrom has only been marginally studied. This is a cross-sectional study conducted at Al-Batool Teaching Hospital for Maternity and Children for the period from August 2017 to June 2018, aiming at determination of the levels of serum uric acid and highly sensitive C-reactive protein titer among newly born with Acute respiratory distress syndrom. Two hundred subjects were included, 100 patients who were admitted to Neonatal care unit with age range 1-2 days. They were 58(58%) males and 42(42%) females. The majority of them (79 %) were born by cesarean section. The control group was age and sex matched apparently healthy infants. A specific questionnaire form was preconstructed for this purpose to ascertain the role of socio-demographic and maternal factors.

Blood samples were collected. Sera were separated and kept frozen at -20 °C till use. Determination of Serum uric acid was carried out by uric acid integration; the determination of highly sensitive C-reactive protien was measured byC-Reactive protein (Latex) high sensitive. Human privacy was respected by taking patient's parents verbal' consent. Furthermore, the study was approved by the Ethical Committee of the College of Medicine-Diyala university.

The results revealed that the mean ± SD of Serum uric acid in patients was significantly higher than that of controls (328.52 ± 151.19 *versus*264.15 ± 85.12, *t-test* = 3.71, **P =0.001**). Similarly, the mean SD of highly sensitive C-reactive protien titer was significantly elevated in Respiratory distress syndrom patients compared to controls (5.19 ± 16.11*versus*1.3 ± 1.7, *t-test* = 2.398, P= **0.017**).

In the patient group, the statistical analyses showed that the Serum uric acid was significantly higher in patients weighted less than 2.5 Kgs compare to those weighted 2.5-3.5 Kgs (373.43±168.8 *versus* 293.4±124.85, *t-test* = 2.688, P= **0.008**). Regarding the gestational age, preterm patients had significantly higher Serum uric acid compared to term patients (341.04 ±141.75 versus 229.57 ± 75.58, *t-test* = 2.435, **P = 0.017**). The results also showed that patients who required medical intervention had higher levels of serum uric acid than those who didn't (337.5± 157.13*versus*157.13± 84.41, *t-test* = 2.395, P = **0.024)**.Furthermore, It was found that patients who were dead had significantly higher titer of Serum uric acid compared to those who were discharged well (297.94 ± 178.95 *versus* 272.87 ± 80.93, *t-test* = 8.545, **P = 0.001**). It is worthy to mention that the majority of patients (88%) were discharged well. However, other factors including gender and age showed insignificant effect (**P = 0.654** and **P =0.277**) respectively.

Concerning the highly sensitive C-reactive protien titer levels, the results found that preterm patients had significantly higher titer compared to term patients (5.97 ± 17.09 *versus* 1.71± 1.58, *t-test* = 2.066, **P = 0.042**). However, other factors including

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gender, age, weight, intervention required and final outcome were failed to reach the levels of statistical significance (**P =0.974**, **P =0.493**, **P =0.161**, **P =0.084** and **P =0.504**) respectively.

The results were also showed that maternal factors namely, history of previous baby with Respiratory distress syndrom and using steroid medication before delivery had neither effect on the mean concentration of Serum uric acid (**P =0.618 and P=0.8**)respectively**,** nor the mean titer of highly sensitive C-reactive protien (**P =0.963 and P = 0.951**) respectively. The present study concluded that the serum uric acid concentration and the highly sensitive C-reactive protein titer can be employed as diagnostic predictor for respiratory distress syndrome in newly born infants, and certain patient's and mother's features are significantly associated with these markers.

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Thesis Title	**Immunohistochemicalexpression of CASPASE9 and FABP3 in heart tissue following electrocution in human and rat: A postmortem study**
Year	**2018**

Abstract

During medico-legal daily practice, electrocution is a violent cause of death that is related to the wide use of electricity and electrical devices in different modern life activities at home and workplaces.The electrical current can cause skin lesions, multi-organs damage and even death due to elaboration of different types of energy during its passage through tissues, including the electric energy (electroporation), thermal energy and mechanical energy.

The severity and extent of tissue injuries depend upon current type, strength, voltage, frequency, duration of exposure, tissue resistance and the path of the current through the body. Microscopic examination of tissue samples from heart may show non-specific findings and sometimes none is detected by conventional H & E stains. Therefore; immunohistochemical study could help the forensic pathologists in their diagnosis especially in cases with less typical findings or obscure circumstances.

Heart-type fatty acid binding protein 3 (H-FABP3) is a small cytoplasmic protein of (15 kDa) that is composed of 132 amino acids, involves in active fatty acid transportation and metabolism. Due to its cytoplasmic location and small molecular weight, it is released from cardiac myocytes into the circulation following an ischemic episode. CASPASE9 is an initiator caspase which is activated during the mitochondrial cell death pathway and its active form will cleave procaspase-3 & procaspase-7, which in turn cleave several cellular targets.

Aims:

1. Highlight the role of immunohistochemical staining technique in the medico-legal diagnosis of heart tissue injury to be a cause of death following electrocution.

2. Evaluate the effect of electric current on expression levels of H-FABP3 and activated CASPASE9 in heart tissue samples of human and rat

3. Determine the changes of H-FABP3 and active CASPASE9 expression levels in heart tissue samples during variable postmortem intervals.

Samples, materials and methods:

During this study immunohistochemical testing of two types of samples was done. First, human heart tissue samples were collected during autopsy of 30 electrocution cases and 30 cases of fatal head injuries (were used as control). Second, the experimental electrocution was conducted on 5 rats while cervical dislocation done for another 5 rats following anesthesia , so rats heart tissue were harvested at specific postmortem intervals(immediately, 2 hr ,4 hr, 6 hr, 8 hr ,10 hr , 12hr , 14 hr , 16 hr ,18 hr , 20 hr , 22 hr and 24 hr). Human and rats heart tissue samples were formalin-fixed-paraffin-embedded, sectioned to 5µm slices, mounted on positively charged slides. After deparaffinization, tissue slides stained with H&E stain as well as heart tissue active CASPASE9 and H-FABP3 was detected with Caspase 9 polyclonal antibody (from Bioss) and Fatty Acid Binding Protein 3 polyclonal antibody (from Bioss) respectively, and demonstrated by ready to use (Biotin free, One-Step HRP Polymer anti-mouse , rat & rabbit IgG with DAB) from BioVision incorporation (USA). IV For each section, five regions of interest were randomly selected then examined by microscope with built-in capturing software. Images were transferred to Adobe Photoshop software (CC 14.5) for digital analysis regarding histological changes as well as the expression levels of FABP3 & Caspase 9 in cardiac cells of human and rat samples.

The average stain intensity(I) of each marker graded as(weak,+1;moderate,+2 and strong ,+3) while stain percent(P) graded as ($0 < 5\%$; $1 = 5\text{-}25\%$; $2 = 25\text{-}50\%$; $3 = 50\text{-}75\%$ and $4 = > 75\%$), then total score (Q) was calculated to be ($Q = I*P$) for each section.

Data analysis was performed using IBM SPSS v.24 software. Numerical data were presented as mean±standard deviation (SD) then tested statistically with suitable tests at a confidence interval of 95% with P-values of <0.05 were considered statistically significant and those <0.01 had high statistical significance.

Results:

This study shows that electrocution was the 4th cause of violent death, being responsible for death of only (4.5 %) cases referred to the Medico-Legal Directorate (MLD) in Baghdad during the period of study. It represents a cause of preventable, almost accidental death in our society with higher incidence to be due to contact with low-voltage household AC current sources. Young males at age of (15-20 years old) were being more exposed to fatal electrical injury than females (with male:female ratio = 6:1).

Heart tissue ischemia was a major cause of death following electrocution especially when victim being in contact with household low– voltage AC current in the presence of trans-thoracic pathway to the ground and low body resistance due to wet skin which can cause death within minute in association with mild if any electrical skin burns.

Electrocution had a significant effect on H-FABP3and CASPASE9 stains total index. It caused depletion in FABP3 total stain index with mean of 0.28+0.149177SD and increased activated CASPASE9 stain total index with mean of 0.93+0.49982 SD for tissue sections of the heart muscle in the affected areas of human cases with similar effect proved by experimental electrocution of rats.

There was an inverse correlation between heart tissue H-FABP3 stained and PMI, whereas a significant direct correlation had been found between activated CASPASE9 tissue stain and PMI, both in human and rats.

Conclusions:

Immunohistochemical heart tissue samples examination for H-FABP3 and activated CASPASE9 is of value in detecting heart tissue injury following electrocution during the early period after death even in the absence of gross and microscopic visible heart lesion(s).

Electrocution causes dramatic depletion in H-FABP3 and increase activated CASPASE9 total stain indices in heart tissue samples, both will be extensive whenever body resistance to current decreased and the duration of exposure increased.

Once started, postmortem autolysis has additional effect on the expression levels of H-FABP3 and activated CASPASE9 in heart tissue samples. Therefore, delayed autopsy should be avoided as much as possible to have more reliable results.

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Thesis Title	**Detection Of Coronary Artery Disease Using 2D- Regional (Segmental) Longitudinal strain (RLS) Comparing with Coronary Angiography in Patient with Acute Coronary Syndrome**
Year	**2018**
Abstract	**Background: Speckle-tracking echocardiography is a new noninvasive ultrasound imaging technique that allows for evaluation of global and regional myocardial function.** **Aim of the Study: to evaluate the accuracy of regional(segmental) longitudinal strain by 2D - STE for pick up culprit vessels in ACS by detecting ischemic segments of the corresponding territories and its severity compared with coronary angiography as a gold standard, in patients with acute coronary syndrome .** **Patients and Methods: A cross sectional study was held in Baghdad teaching hospital from March 2017 to March 2018, consisted of patients with acute coronary syndrome(ACS) underwent 2D-STE for left ventricular regional longitudinal strain(RLS) immediately before invasive coronary angiography .** **Results: Fifty patients who fulfilled the inclusive criteria were enrolled in this study. The mean age 57.2 (± 7.9) years; and male:female ratio 1.9:1. Regional Longitudinal strain -speckle tracking showed 38 patients had CAD and 12 patients had no CAD, Versus coronary angiography which showed 29 patients had CAD while 21 patient had no CAD or non significant lesions. The validity of RLS according to coronary angiography showed sensitivity 100%, specificity 57.1% ,PPV 76.3%,NPV 100%, and accuracy 82%.** **VI** **Conclusion: The current study revealed that (RLS) Speckletracking echocardiography technique has high sensitivity but with relatively low specificity in diagnosis of coronary artery disease in patient with acute coronary syndrome.**

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Thesis Title	**Violence against Health Care Workers in Baghdad**			
Year	**2018**			

Abstract

Background: The problem of aggression towards health care staff is global and on the increase, it is difficult to gauge its extent since under-reporting of violent incidents is common and is probably influenced by social or cultural factors.

Objective: To explore the magnitude of violence against healthcare workers in Baghdad, and its possible consequences.

Methods: A cross-sectional study was carried out among 700 health care workers during the period from December through June 2018. The sample was collected from six major teaching hospitals, and 01 primary health care centers in both sides of Baghdad. The questionnaire focused on their exposure to any form of violence, probable reasons behind it, time and place of the exposure, weather it was reported or not, consequences of the violence and their perspective about the future.

Results: The majority of respondents (85.9%) reported exposure to different types of violence, mainly at the workplace and during daytime. Males experienced a significantly higher exposure (p=0.0001), 24.7% of the health workers were displaced from their residential area. The perpetrators were mostly the patients' relatives (63.9%), followed by the patients themselves.

84.8% said that they don't feel safe at the workplace and 64.4% are not

optimistic that the situation is going to get any better in the near future (p=

0.0001).

Conclusions: There is a surge of violence against health care workers in

Baghdad. Male gender, young age, and short years of work experience are

positively associated with workplace violence. Synchronized coordination

between Ministries of Health, of Interior and of Justice is fundamental to

control and lessen this malpractice.

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Thesis Title	**Primary Health Care Physicians' Knowledge and Attitude towards Elderly in Baghdad/Al-Karkh**
Year	**2019**
Abstract	It is important for primary health care physicians to possess adequate knowledge and attitude towards geriatrics to cope with the increasing number of elderly patients care during their daily practice. **Objective:** To assess the knowledge and attitude of PHC physicians towards elderly and to study the relation between some factors with physicians' knowledge and attitude. **Methodology:** A cross sectional study was conducted in 31 primary health care centers in Baghdad/Al-Karkh for a period of 3 months extended from 1st of March to the end of May 2018. A self-administered questionnaire was used for data collection. The questionnaire comprised questions to assess knowledge and attitude towards elderly. In addition, the collected data covered some characteristics of the physicians. **Results:** Out of 225 primary health care physicians working at the chosen primary health care centers, 200 physicians enrolled in the study, with a response rate of 88.88%. The results showed that only 27.5% of physicians had good levels of knowledge and 117 (58.5%) had positive attitude. Better levels of knowledge and attitude were achieved by family physicians, female gender in addition to those who work for less than 5 years in primary health care centers. **Conclusion:** Despite positive attitude of physicians towards elderly, the study revealed knowledge that necessitate the need for better training and continuing medical education in regard to elderly.

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Thesis Title	**Single Nucleotide Polymorphism (SNP) Panel for Telomerase, XPC, and XRCC7 Genes Variants in Iraqi Smoker Patients with Bladder Tumor**
Year	**2019**

Abstract

Bladder cancer is one of the most common malignancies of the urinary tract.Prolonged tobacco consumption constitutes the major etiological factors for bladder cancer development, which induce DNA damage. Therefore, DNA repair pathway is a crucial system in maintaining genomic integrity and preventing carcinogenesis. The present work was aimed to predict the consequence of three polymorphisms of the DNA repair genes (TEP1/rs2228041, XPC/rs2228000, and XRCC7 7003908) on the disease predisposition.

Objectives

The main objective of this study is attempted to find the association between SNPs in different DNA repair pathway and investigating the influence of active tobacco smoking on human DNA repair gene polymorphisms (TEP1/rs2228041, XPC/rs2228000 and XRCC7 7003908) in patients with bladder cancer in and the impact of these polymorphism on the staging and development of the disease.

Subjects and Methods

A total of 62 of histo-pathologically confirmed diagnosed bladder cancer patients, and 38 age-matched healthy controls were involved in the study. All were recruited from February to September 2017 in a case-control study conducted at the Department of Biochemistry-College of Medicine University of Baghdad.

Genotyping of the TEP1/rs2228041 (C>T) and XPC rs2228000 (C>T) was evaluated using polymerase chain reaction and fully genotyped by Sanger sequencing method.

Genotyping of the XRCC7 polymorphism (T>G) was evaluated using a polymerase chain reaction-restricted fragment length polymorphism (PCR-RFLP) and confirmed by Sanger sequencing method. The odds ratio (OR) and 95% confidence interval (CI) were calculated as a

measure of the combined effect of cigarette smoking, and DNA Repair Genes Polymorphisms on bladder cancer risk, staging.

Results

In this study,the polymorphic T allele of the TEP1 rs222804 polymorphism showed a significant association in increase bladder cancer riskOR = 4.7, p=٠,٠٤. Also, the T allele showed a significant association in increase bladder cancer risk among smoker individuals OR=7.02, p=٠,٠١. Furthermore, the T allele showed a significant association for the T2 stage of bladder cancer(OR=13.2, p=0.001). Heterozygous genotype of the XPC rs2228000 (C>T) showed a significant increase in bladder cancer risk OR =2.75, p value<0.05. Also, the study found that patients with the polymorphic allele (T genotype) have significantly increased the risk of bladder cancer (OR= 2.7; p = 0.02).

A statistically highly significant increased in bladder cancer riskwas found in the smoker individuals who carrying T Allele (OR= 4.3; p = 0.004). Moreover, T Allele genotypes were also observed to be associated with a significantly increased risk of T1 (OR= 3.9; p = 0.005).

In the current study, individuals with the homo polymorphic gene (GG genotype) have significantly increased the risk of bladder cancer (OR= 4.0; p = 0.03), while subjects having the homo wild-type gene (TT genotype) could decrease the risk of bladder cancer. Also, a statistically highly significant increased bladder cancer risk in the smoker individualswhocarrying G Allele (OR= 5.5; p = 0.0001). G Allele genotypes were also observed to be associated with a significantly increased risk of T2 (OR= 3.7; p = 0.001), and for Ta (OR= 3.5; p = 0.003).

Conclusion

The present study suggested that having polymorphic genotypes of DNA repair gene polymorphisms (TEP1/rs2228041, XPC/rs2228000 and XRCC7 7003908) could increase the risk of bladder cancer and also affect the development and staging of the disease while having the wild type genotypes could decrease the risk of bladder cancer and increase the survival rate of bladder cancer patients. Furthermore, these gene polymorphisms could be a useful tool to tackle these emerging problems and is an attractive target for individual anticancer treatment

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Thesis Title	**ELECTRODIAGNOSTIC EVALUATION OF AUTONOMIC DYSFUNCTION IN DIABETES MELLITUS**
Year	**2019**

Abstract

 Diabetic autonomic neuropathy is a serious and common complication of diabetes. The most studied and clinically important form of diabetic autonomic neuropathy is cardiovascular autonomic neuropathy.
Aim of study: To assess the autonomic dysfunction in diabetics electrodiagnoctically using reliable tests by sympathetic skin response and R-R interval tests.
A cross-sectional study was conducted in the Electromyography unit in Baghdad Teaching Hospital between (Feb/1/2018 – May/15/2018). It included all adult male and female with symptoms of neuropathy or autonomic dysfunction. Pregnant women were excluded from the study. Neurological tests were performed as sympathetic skin response, and R-R interval including normal and deep breath, Valsalva and tilt tests).
Means of sympathetic skin response amplitude, R-R interval (Valsalva), and R-R interval (tilt) tests were significantly higher in non-diabetic patients than diabetics (2.19 versus 0.541, P= 0.001; 1.75 versus 1.48, P= 0.017; and 1.44 versus 1.01, P= 0.002 respectively). They were also significantly higher in controlled than in uncontrolled diabetic patients (1.69 versus 0.15, P= 0.044; 1.99 versus 1.31, P= 0.039; and 1.23 versus 0.941, P= 0.022 respectively). Cut points of these tests between controlled and uncontrolled diabetic patients were (0.81, 1.84, and 1.04 respectively). This mean that all patients with tests below these values can be considered uncontrolled diabetics. Sympathetic skin response amplitude, and R-R interval tests are good electro diagnostic tests to evaluate the autonomic dysfunction affected by diabetes, and to assess the severity of autonomic dysfunction in uncontrolled diabetes and differentiating them from those with controlled diabetes.

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Thesis Title	*Galectin-8 Gene Polymorphism In Rheumatoid Arthritis Patients.*		
Year	2018		
Abstract	Rheumatoid arthritis is chronic inflammatory arthritis disease with significant morbidity and mortality .Early diagnosis is important for beter treatment and outcome.Galectins are potent immune regulators and modulate a range of pathological processes, such as inflammation, autoimmunity, and cancer,Accumulated evidence shows that several family members of galectins play positive or negative roles in the disease development of RA, throughtheir effects on T and B lymphocytes, myeloid lineage cells, and fibroblast-like synoviocytes. This case controls study assess the association between serum galactin-8 gene polymorphism in RA and controls .And also measure the serum level of Galectin-8 in RA patient and controls and its validity in early diagnosis. *Patients and Methods:* This study was conducted in the period between November 2016 till the end of November 2017 on ninety (90) subjects, fifty (50) of them (patient group) were diagnosed as established RA patients, who were attending the Rheumatology Outpatient Clinic of Baghdad Teaching hospital, and other forty (40) were apparently healthy control group.Blood samples were collected from patients and controls to assess serum galectin-8 and ACCP by enzyme linked immunosorbent assay (ELISA), the CRP was measured by nephlometer,and RF by latex agglutination method,Whereas Galectin-8 gene Polymorphism done by Amplification-Refractory Mutation System-PCR (ARMS-PCR). *Results:* 50case study group included in the current study, their mean age46.5±10.4 years, the females were predominant than males in a ratio (F:M2.6:1). The current study revealed that serum levels ofgalectin-8) higher in control group (182.93±87.83) than patient group (36.68±25.79) and this difference is statistically significant (P-value < 0.001).		

At the optimum cut off value of serum gal-8 ≤ 95.7 we found that maximum accuracy was 95.6 , sensitivity 98.0%, specifity 92.5% and AUC was 0.971 this indicate that the biomarker has excellent valid results to differentiate bet patient and control.

In the present study there was negative significant correlation between serum galectin-8 and ESR,ACCP,RF.

there was no significant difference between patients and controls regarding galectin-8 gene polymorphism. TT allele had the highest association with RA while AT allele had the weakest association with RA, however; all these alleles did not associated significantly with RA.

Anti-CCP antibodies were detected in 45 (90.0%) patients and were not detected only in 5 (10.0%) patients. Out of 40 healthy controls; the anti-CCP was negative in all healthy controls (100.0%), , with extremely statistical difference ($P <0.001$) between the patients and healthy control group.

The present study showed that CRP was positive in 25 patients (50.0 %), and in 11 subjects (27.5%) from control group and this difference is statistically significant p-value= 0.03

The present findings revealed that RF test was positive in only 25 patients (50.0%), and was positive in nine subjects (22.5%) from control group and this difference was statistically significant (P- Value = 0.007),Mean level of ESR of patientgroup higher than control group and is highly statistically significant (P- Value < 0.0001).

Conclusions:

  The study shown that there was no significant difference between patient and controls regarding galectin-8 gene polymorphism, andthere was significantly less serum galectin-8 in patient compared to control, also there was negative significant correlation between serum galectin-8 and ESR,ACCP,RF.

At the optimum cut off value of serum gal-8 ≤ 95.7 we found that maximum accuracy was 95.6 , sensitivity, specifity   and AUC was 0.971 this indicate that the biomarkerhas excellent valid results to differentiate between patient and control

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Thesis Title	**Physiological Assessment of Right Ventricular Function in Patients with Systemic Hypertension Using Strain Echocardiography**
Year	**2019**
Abstract	The right ventricle or the forgotten chamber is multi-compartmental in orientation with a complex structural geometry. Although the focusing in cardiology was placed on left heart physiology and pathology in the past, there is a growing body of evidence for the importance of the RV especially the maintenance of normal body hemodynamics, exercise capacity in chronic heart failure and survival in patients with valvular heart disease. Arterial hypertension is a major public health problem due to its high prevalence globally. Hypertensive heart disease is the cardiomyopathy which result from myocardial response to the mechanical stress from elevated blood pressure , the influences of neurohormones , growth factors, and cytokines and then leads to variety of abnormalities includes left ventricular hypertrophy (LVH), systolic and diastolic dysfunction, and their clinical complication including arrhythmias and heart failure . In echocardiographic studies, a comprehensive assessment of the right ventricle should be performed using multiple acoustic windows and different image techniques .The two dimensions speckle tracking echocardiography is a novel non-invasive echocardiographic method to calculate myocardial deformation in standard grey-scale images in which every little piece of myocardium in echocardiography image has its own unique pattern of speckles. The aim of this study was to: evaluate the effect of systemic arterial hypertension on systolic and diastolic right ventricular function and to determine the effect of systemic arterial hypertension on right ventricle mechanics using two dimensional longitudinal strains. XVI The total number of hypertensive patients and apparently healthy control subjects were (200) of either sex (118 male and 82 female), their age range from (40 – 60) year; they were divided into two groups: 100 Patients with hypertension, 100 apparently healthy control

subjects. Each patient and control subject was submitted to full medical history, physical examination, ECG, chest X-Ray, blood pressure determination and subject's anthropometry measurements. Echocardiography was performed for all subjects using a GE Vivid E9® system in which M-mode, two dimensional , color, pulse and continuous wave Doppler , tissue Doppler and speckle tracking imaging were obtained according to the American Society of Echocardiography guideline of using Echocardiography in Adult Hypertension.

Trans-tricuspid E/A ratio was decreased in hypertensive group (1.10±0.12) versus (1.39±0.28) in normotensive group with statistically significant difference p value =0.001. The mean tricuspid E/ é ratio was (4.95±1.34) in hypertensive patients while was (3.90±0.98) in control group, the p value was 0.001 and there was significant difference between them. It was observed that the mean 2D-RVGLS was (- 20.12 ± 3.80) % in hypertensive patients versus (- 25.90 ± 2.18) in normal subjects, the P value was 0.001 and there was significant difference between the two groups. The odds ratio of multivariate logistic regression revealed that the diastolic interventricular septum thickness was the strongest factor affect RVGLS in this study, odds ratio for IVSD, RWT, and LVPW were respectively 2.418, 1.978, and 1.761. This study conclude that RV longitudinal strain is significantly impaired in hypertensive patients group and strongly correlates with heart remodeling and it is superior to more conventional functional parameters of RV systolic function

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Thesis Title	**The Association between Lower Limb Osteoarthritis and Prevalence of Depressive Symptoms**
Year	**2018**
Abstract	**Osteoarthritis is a leading cause of disability , and it is a chronic , degenerative , musculoskeletal disease . Depression is a state of low mood and aversion to activity that can affect a person's thoughts , behavior , tendencies , feelings and sense of well-being .** **Objectives:** **The aim of this study was to evaluate the prevalence of depressive symptoms in a sample of Iraqi patients with lower limb osteoarthritis .** **Patients and methods:** **A case control study was conducted from 1st of December 2017 to June 2018 at Baghdad Teaching Hospital (Rheumatology Unit, Department of Medicine). A total of one hundred and thirteen of Iraqi patients with lower limb osteoarthritis had met the inclusion criteria compared to another one hundred and seventeen of controls. Demographics and clinical data were collected including age, sex, BMI, smoking status, marital status, educational status, past medical history ,past surgical history, grade of the disease and disease duration. X-rays of both knee and hip in anteriorposterior view were obtained and blood samples were taken for ESR examination from both groups. All subjects were screened for depressive symptoms by using 20-item Center for Epidemiologic Studies-Depression (CES-D) instrument.** **VI** **Results:** **No statistically significant differences had been found between the**

studied groups in socio-demograghic variables. The prevalence of depressive
symptoms were high in osteoarthritis patients than controls group (23% vs
12.8%)respectively. the prevalence of depressive symptoms were significantly associated with grade of the disease as the prevalence was higher with grade 3 and 4 (84.6% , 7.7%) in comparison to grade 1 and 2
(3.8% , 3.8%) . Also we found that multiple joints involvement had higher
rate of depressive symptoms in comparison to those with single joint involvement. The risk of having depressive symptoms were not different in
the age, gender, marital status and educational status .
Conclusions:
The prevalence of depressive symptoms in lower limb osteoarthritis patients
were significantly higher in patients compared to controls. The depressive
symptoms were high in multiple joints involvement and with high grade of
osteoarthritis.

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Thesis Title	Serum Concentration of Irisin, Resistin, Leptin and 25-Hydroxyvitamin D in Iraqi Men with Type 2 Diabetes Mellitus: Obesity-related study
Year	

Abstract

<u>Background</u>: Diabetes mellitus is a group of metabolic disorders characterized by high blood glucose levels over a prolonged period. Several studies have highlighted the high prevalence of low 25-hydroxyvitamin D in men with type 2 diabetes and demonstrated links with visceral adiposity, insulin resistance. Leptin has an important role in natural and acquired immunity. Irisin, a newly discovered myokine which enhances thermogenesis and energy consumption of the adipose tissue. Resistin is linked to inflammation. *The aim of the present study is to evaluate leptin, irisin, resistin, 25-hydroxyvitamin D serum levels in a population of obese diabetic men in comparison with healthy controls and to identify any correlations that may exist between these parameters.*
<u>Subjects and Methods:</u>
This case-control study was carried out at Department of Biochemistry, College of Medicine, University of Baghdad, El-Imam Ali Hospital/Baghdad Al-Russafa Health Directorate and Research laboratory for the College of Health and Medical Technology/Baghdad, Iraq during the period from July 2017 to January 2018. It consisted of 160 men subjects; 80 men patients with type 2 diabetes mellitus and 80 apparently healthy men age and body mass index matched with patients. So that patients and controls were divided by the same number according to age and BMI. In addition to that the patients were also subdivided according to their obesity into different groups as: *first. Diabetic Normal weight* groups(n=28, BMI 18.5 -24.9 kg/m² , and the age range 40-65 years), *second. Diabetic Overweight* groups(n=19, BMI 25 – 29.9 kg/m², and the age range 40-65 years), and *third. Diabetic Obese* groups(n=33, BMI was over than 30 kg/m², and the age range 40-65 years).
II
Abstract
Controls also divided in such groups. Informed consent was obtained from each subject prior to the study. The task was facilitated by the

Iraqi Ministry of Health.

- *Inclusion* criteria of diabetes patients were based on the presence of history of DM and fasting serum glucose.
- *Exclusion* criteria for diabetic patients and healthy controls included those who have any chronic systemic diseases.

Laboratory investigations included serum measurements of fasting serum glucose and lipid profile parameters, liver function test, renal function test, calcium and phosphorus by using Abbott c4000 automatic biochemical analyzer, as well as, 25-Hydroxyvitamin D, resistin, leptin, irisin and insulin by using ELISA technique in patients and healthy controls groups.

Results:

The mean(±SD) values of fasting serum glucose of diabetic obese, diabetic overweight, and diabetic normal weight patients were significantly higher than that of healthy controls(for all; P<0.0001). The mean value of serum leptin of diabetic obese, diabetic overweight and diabetic normal weight was lower than that of healthy obese, overweight and normal weight, but did not reach the significant level. The mean(±SD) values of resistin levels were no significant difference in diabetic obese and diabetic normal weight when compared to that of healthy obese and normal weight. Also, the mean(±SD) values of serum resistin levels of diabetic overweight were no significant difference in comparison with that of healthy overweight. The mean(±SD) values of serum irisin concentration were significantly decreased in diabetic obese when compared with that of healthy obese(p<0.030).

While, the mean value of serum irisin of diabetic overweight and diabetic normal weight was higher than that of healthy overweight and normal weight, but did not reach the significant level. Serum levels of 25-hydroxyvitamin D did not differ significantly among the patient groups and controls. The results also showed that there was significant positive correlation between the serum 25-hydroxyvitamin D levels and the irisin values in diabetic obese group(r= 0.398, P<0.022).

Conclusion:

The present study suggested the significant role of irisin myokine in pathogenesis of diabetes mellitus type 2, while that of resistin and vitamin D need to be evaluated in one more large study. Obesity may have an important effect on blood levels of irisin and vitamin D. Diabetes mellitus has no significant association with serum levels of leptin, but obesity has significant effect on serum leptin levels.

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Thesis Title	The expression of human telomerase reverse transcriptase in adult acute myeloid leukemia and its correlation with various clinic-pathological parameters
Year	2019
Abstract	Background: Acute myeloid leukemia (AML) is a heterogeneous disorder characterized by clonal expansion of myeloid progenitors (blasts) in the bone marrow and peripheral blood, AML accounts for 80% of acute leukemia in adults, its incidence increase with age. AML can be a fatal disease so research to predict prognosis is important. Telomerase (TA) is enzyme that stabilizes the telomere length and makes the cell immortal, is absent in most of the normal cells and presents in 85% of tumors in humans, it has been shown that TA can be used as prognostic marker in some solid and hematological neoplasm, Telomere length is factor that predicts telomere function. Aim: We test the quantitive amount of HTERT gene expression in AML (diagnosed according to FAB) adult and its correlation with various clinic-pathological parameters Patients and Methods: we used the TRAP assay to assess the hTERT gene expression in mononuclear blood cells from 40 newly diagnosed AML patients (25 AML patients of them follow up done for them after completing their course of treatment), and 15 control healthy subjects. Results: The mean value of hTERT in AML and control groups were [1.59 ± 1.27 (anm) and 0.035 ± 0.046 (anm) respectively], and this difference was significantly higher in patients than in control group ($p = 0.0001$). The telomerase activity was positive in 27 (67.5%) AML patients, while 13 (32.5%) AML patients were negative for telomerase activity. Twenty-five patients after induction chemotherapy were followed up by bone marrow and peripheral blood examination to determine patient's response to therapy. Complete hematological [VI] remission was achieved in 12 (48.0%) patients and incomplete hematological remission in 13 (52.0%) patients (14%). The hTERT level was significantly higher in patients before induction

chemotherapy than after completion of the induction course (p = 0.0001). The hTERT level at diagnosis in patients who did not achieve complete hematological remission was significantly higher than that in patients who achieved complete hematological remission (p = = 0.026). The hTERT level after induction therapy was significantly higher in patients who did not achieve complete hematological remission than in patients who achieved complete hematological remission (p = 0.003). Conclusion: our research suggests that the hTERT expression could serve as a prognostic marker for AML patients.
Keywords: AML, telomerase, hTERT, prognosis, TRAP assay