

87. Al-Baharna MM, Whitford DL. Clinical Audit of Diabetes Care in the Bahrain Defence Forces Hospital. Sultan Qaboos University Med J. 2013;13(4):520-6.

Objectives: Primary care audits in Bahrain have consistently revealed a failure to meet recognised standards of delivery of process and outcome measures to patients with diabetes. This study aimed to establish for the first time the quality of diabetes care in a Bahraini hospital setting. **Methods:** A retrospective clinical audit was conducted of a random sample of patients attending the Diabetes and Endocrine Center at the Bahrain Defence Forces Hospital over a 15-month period which ended in June 2010. The medical records of 287 patients with diabetes were reviewed electronically and manually for process and outcome measures, and a statistical analysis was performed. **Results:** Of the patients, 47% were male, with a median age of 54 years, and 5% had type 1 diabetes.

Measured processes, including haemoglobin A1c, blood pressure, lipids, creatinine and weight, were recorded in over 90% of the patients. Smoking (8%) and the patient's body mass index (19%) were less frequently recorded. Screening for complications was low, with retinal screening in 42%, foot inspection in 22% and microalbuminuria in 23% of patients. **Conclusion:** This study shows that the implementation of recognised evidence-based practice continues to pose challenges in routine clinical care. Screening levels for the complications of diabetes were low in this hospital diabetes clinic. It is important to implement a systematic approach to diabetes care to improve the quality of care of patients with diabetes which could lead to a lowering of cardiovascular risk and a reduction in healthcare costs in the long term.

88. Alqahtani MM, AlAbsi MF. Comparative analysis between levofloxacin and ciprofloxacin to assess their bactericidal activity using antimicrobial susceptibility disk diffusion on isolates obtained from urine samples. J Bahrain Med Soc. 2013;24(2):53-5.

Background: Urinary tract infection is one of the most common clinical presentations at the Bahrain Defence Force Hospital (BDFH) where fluoroquinolone (ciprofloxacin) is the first-line prescribed antibiotic. Levofloxacin has recently been added to the antibiotic formulary. This study was based on culture-positive urine specimens collected in the period February 1 to August 31, 2011. The objective of this study was to analyze the antimicrobial sensitivity of ciprofloxacin compared to levofloxacin on clinical isolates obtained from patients with UTI at BDFH. **Methods:** The sensitivity analysis on both antibiotics was carried out using 5-microgram disk diffusion on 452 isolates obtained from patients. The in-vitro activity of the two fluoro-quinolones was evaluated based on the zone of inhibition produced by each antibiotic. The values for the zones were obtained from the Clinical and Laboratory Standards Institute (CLSI-2011).

Results: Overall levofloxacin provided an improved sensitivity response in patients with culture-positive Enterobacteriaceae (71%) as compared to ciprofloxacin (67%). In addition, the culture results showed that the most common UTI causative organisms in BDFH were E-coli (63.9 %), followed by Klebsiella pneumoniae (17.3%), Proteus species (7.1%) and Pseudomonas aeruginosa (2.7%). There was a statistically significant difference ($p=0.04$) in response to the two fluoroquinolones among the four groups of organisms. Levofloxacin showed statistically significant disk diffusion susceptibility response among E-coli ($M=20.38$, 95% CI [18.69, 22.07]) and Klebsiella pneumoniae ($M=26.33$, 95% CI [24.45, 28.22]) $p=0.01$, while there was no significant difference in disk diffusion susceptibility response among Proteus species and Pseudomonas aeruginosa. **Conclusion:** Levofloxacin had a significantly better disk diffusion sensitivity response than ciprofloxacin in patients with E-coli and Klebsiella pneumoniae culture positive urine specimens.

89. AlQaseer A, AlAradi A. Immediate versus delayed laparoscopic cholecystectomy in patients with acute cholecystitis: A retrospective audit. Journal of the Bahrain Medical Society. 2013 //;24(3):108-11.

Background: Laparoscopic cholecystectomy has become the gold standard for the surgical treatment of acute cholecystitis. However, controversies still arise regarding the timing of the laparoscopic approach for optimum results. The aim of this study is to compare outcomes of early laparoscopic cholecystectomy versus delayed laparoscopic cholecystectomy. **Method:** During a 12-month period (01/03/11-10/04/12) all laparoscopic cholecystectomies performed were reviewed. Pre-operative, operative, and post-operative clinical notes and files were collected. A total of 43 patients were included in this audit as they met the selection criteria, with 24 patients in the early group versus 19 in the delayed. Of these, 29 were female and 14 male with a mean age of 41.8 years and 42.4 years respectively. **Results:** Cholecystectomy was successfully completed in 42 patients (97.67%), conversion to open was necessary in one patient in the early group. There was no morbidity, mortality, or injury to the common bile duct during this period. No significant difference was seen in terms of post-operative complications. Mean immediate post-surgery hospital stay was 1.04 days for the early group, compared with 1.53

days in the delayed. Conclusion: Early laparoscopic cholecystectomy for acute cholecystitis, within 48-72 hours of presenting symptoms, has proven to be the preferred approach by both surgeons and patients. It allows for a shorter hospital stay, satisfactory complication levels and reduced costs. A policy should be implemented to evaluate each patient individually, and consider associated co-morbidities and surgeons' experience.

90. Al-Saie AM, Henari FZ, Souier T, Bououdina M. Structural, optical and non-linear optics properties of highly doped molybdenum indium oxide thin film. Journal of Materials Science: Materials in Electronics. 2013 //:1-8.

Molybdenum (Mo)-doped In₂O₃ thin film with 10 wt% was successfully prepared by evaporation method. After annealing at 600 °C the film changes its colour from very dark to a clear transparent film. SEM and AFM analysis reveal that the film is continuous with high metallic coverage >98 % and exhibits a granular structure with typical grain size of 50 nm. More interestingly, the film shows more than 90 % transparency from visible to near infrared region and with wide optical band gap of 4.26 eV. The widening of the band gap is due to the Burstein-Moss (BM) effect as Mo will occupy In sites within the structure of the film thus increasing the carrier concentration thus enhancing its electrical properties. The nonlinear optical properties of Mo-doped In₂O₃ film with glass substrate were investigated using z-scan technique. Under cw excitation the film exhibits large reverse saturation absorption and negative nonlinearities. The real and imaginary parts of third order susceptibility of the film were measured and found that the imaginary part which arises from the change in absorption is dominant. © 2013 Springer Science+Business Media New York.

91. Borgan SM, Marhoon ZA, Whitford DL. Beliefs and Perceptions Toward Quitting Waterpipe Smoking Among Cafe Waterpipe Tobacco Smokers in Bahrain. Nicotine & tobacco research : official journal of the Society for Research on Nicotine and Tobacco. 2013 May 14. PubMed PMID: 23674839. Epub 2013/05/16. Eng.

INTRODUCTION: There is a rising prevalence of waterpipe smoking worldwide, but still a paucity of information on perceptions toward quitting waterpipe use. We set out to establish the beliefs and perceptions of cafe waterpipe smokers toward quitting waterpipe smoking in the Kingdom of Bahrain. **METHODS:** A cross-sectional study. A random sample of 20 of 91 cafes serving waterpipe tobacco in Bahrain was taken. A questionnaire was administered in each cafe to 20 participants aged 18 and above. **RESULTS:** Three hundred eighty participants completed questionnaires from waterpipe smokers. Eighty-four percent of participants were Bahraini and 71% have a university degree. Mean age was 28.9 years. Average age of waterpipe smoking initiation was 20.3 years. The majority of waterpipe users chose flavored tobacco. Sixty-one percent smoked waterpipe tobacco daily with a mean smoking time of 2.6hr/day. Seventy-two percent considered waterpipe tobacco as harmful as or more harmful than cigarettes, but 67% considered cigarettes as more addictive. Eighty-two percent stated that they could quit waterpipe at any time, but only 40% were interested in quitting. Interest in quitting smoking was related to 4 variables: a physician mentioning the need to quit smoking, being non-Bahraini, having a family with a hostile attitude toward waterpipe smoking, and not considering oneself "hooked" on waterpipe tobacco. **CONCLUSIONS:** Waterpipe smokers in Bahrain cafes are frequent and high users. Health professionals must consider waterpipe smoking in all consultations and health promotion messages. A partnership between health professionals and disapproving members of families may be an effective strategy in encouraging waterpipe smokers to quit.

92. Dakhel AA, Jasim KE, Cassidy S, Henari FZ. Extraction and dielectric properties of curcuminoid films grown on Si substrate for high-k dielectric applications. Materials Science and Engineering B: Solid-State Materials for Advanced Technology. 2013;178(16):1062-7.

Curcuminoids were extracted from turmeric powder and evaporated in vacuum to prepare thin films on p-Si and glass substrates for dielectric and optical investigations. The optical absorption spectrum of the prepared amorphous film was not identical to that of the molecular one, which was identified by a strong wide absorption band in between ~220 and 540 nm. The onset energy of the optical absorption of the film was calculated by using Hamberg et al. method. The dielectric properties of this material were systematically studied for future eco friendly applications in metal-insulator-semiconductor MIS field of applications. The complex dielectric properties were studied in the frequency range of 1-1000 kHz and was analysed in-terms of dielectric impedance $Z^*(\omega)$ and modulus $M^*(\omega)$. Generally, the curcuminoid complex can be considered as a high-k material and can be used in the environmental friendly production of microelectronic devices. © 2013 Elsevier B.V. All rights reserved.

93. Grey I, Al-Saihati BA, Al-Haddad M, McClean B. Reasons for referral, intervention approaches and demographic characteristics of clients with intellectual disability attending adult psychiatric outpatient services in the Kingdom of Bahrain. Journal of Intellectual Disability Research. 2013 //.

Background: Relatively little information is available regarding the use of psychiatric services by individuals with intellectual disability (ID) in Arab countries. The current study aimed to identify (1) the reasons for referral; (2) demographic characteristics of individuals referred; (3) previous contact with child psychiatric services; (4) psychiatric diagnoses; (5) level of ID; (6) nature of interventions; and (7) patterns of medication usage in individuals attending a specialist psychiatric service for individuals with an ID in the Kingdom of Bahrain. Method: Case file analysis was used. Files that recorded attendance at the specialist service within a specific calendar year were selected. A total of 537 files were available for review and 79 contained records indicating the individual had been seen within the year. Results: The primary referral reason to adult psychiatric services was the presence of behavioural disturbance. Pharmacological intervention was the dominant treatment choice and no individual was recommended for psychological/behavioural intervention. Psychiatric diagnosis was not recorded in over 90% of cases. Conclusion: Services in the Kingdom of Bahrain for individuals with ID rely exclusively on pharmacological approaches for the treatment of behavioural disorders. Implications for best practice guidelines are discussed. © 2013 John Wiley & Sons Ltd, MENCAP & IASSID.

94. Hayes A, Holden C, Gaynor D, Kavanagh B, Otoom S. Bridging the gap: A program to enhance medical students' learning experience in the foundation year. Bahrain Medical Bulletin. 2013;35(4).

Objective: To evaluate students' perceptions of the intervention program based on small group teaching, regular continuous assessment, science-based tailored study skills program and recorded attendance on students' enhanced learning experience in the first year of study in an outcome-based medical course. Design: Descriptive study. Setting: RCSI Bahrain. Method: A Twenty-seven-item questionnaire was administered to foundation year students at the Royal College of Surgeons in Ireland - Medical University of Bahrain (RCSI Bahrain) after the completion of the first semester to explore whether these interventions enriched the students' learning experience or not. Comparisons of pass rates in all modules over the four years were also included. Students' perceptions of the academic study skills course were collected through a questionnaire activity (version 2007120102) via the Virtual Learning Environment (VLE). Result: The results suggest that local adaptations of undergraduate programs may lead to pedagogical expertise that contribute to enhanced learning experience of students and better integration of pre-university and third-level courses. The majority of questionnaire items were rated positively and the comparison of pass rates showed the highest results in the year the intervention was implemented. Conclusion: Making local adaptations to medical programs without changing the core curriculum can mark good academic practice. Considering specific socio-cultural frameworks of students may lead to improvements in the delivery of programs in universities.

95. Henari FZ, Cassidy S, Jasim KE, Dakhel AA. Nonlinear refractive index measurements of curcumin with CW laser. Journal of Nonlinear Optical Physics and Materials. 2013 //;22(2).

We report on the measurements of the nonlinear reflective index coefficient for curcumin at three different wavelengths using a Z-scan technique. This material is found to be a new type of natural nonlinear media. It shows a large negative nonlinear refractive index of the order of 10^{-6} cm²/W. The origin of the nonlinearity was investigated by comparison of the formalism that is known as the Gaussian decomposition model with the thermal lens model. The nonlinear refractive index was found to vary with intensity and reveals that curcumin can be a promising material for optical limiting. © 2013 World Scientific Publishing Company.

96. Henari FZ, Jasim KE. All optical switching in henna thin film. Applied Physics B: Lasers and Optics. 2013 //:1-5.

The optical nonlinearity in henna (Lawson (2-hydroxyl-1,4 naphthoquinone) film was utilized to demonstrate all optical switching. The nonlinear absorption of the henna film was calculated by measuring the transmission of the laser beam ($\lambda = 488$ nm) as a function of incident light intensities. The observed nonlinear absorption is attributed to a two-photon absorption process. The pump and probe technique was used to demonstrate all optical switching. The switching characteristics can be utilized to generate all-optical logic gates such as simple inverter switches (NOT) NOR, AND NAND logic functions. © 2013 Springer-Verlag Berlin Heidelberg.

97. Horobin RW, Rashid-Doubell F, Predicting small molecule fluorescent probe localization in living cells using QSAR modeling. 2. Specifying probe, protocol and cell factors; selecting QSAR models; predicting entry and localization. Biotechnic and Histochemistry. 2013 //;88(8):461-76.

We describe the practical issues and the methodological procedures that must be carried out to construct and use QSAR models for predicting localization of probes in single cells. We address first the determination of probe factors starting with a consideration of the chemical nature of probe molecules present. What is their identity? Do new compounds arise in incubation media or intracellularly? For each probe, how many distinct chemical species are present? For each probe species, the derivation of the following numerical structure parameters, or descriptors, is set out with worked examples of electric charge and acid/base strength (Z and pKa); hydrophilicity/lipophilicity (log P); amphiphilicity (AI and HGH); conjugated bond number and largest conjugated fragment (CBN and LCF); width and length (W and L); and molecular and ionic weights, head group size and substituent bulk (MW, IW, HGS and SB). Next, protocol factors are specified by focusing separately on the mode of introduction of the probe to the cells, other application phenomena, and factors that influence directly observations of outcomes. Cell factors then are specified by considering separately structural and functional aspects. The next step is to select appropriate QSAR models and to integrate probe, protocol and cell factors to predict the interactions of the probe with the cell. Finally, we use an extended case example to explore the intracellular localization of certain photodynamic therapy dyes to illustrate these procedures. © 2013 The Biological Stain Commission.

98. Horobin RW, Rashid-Doubell F, Pediani JD, Milligan G. Predicting small molecule fluorescent probe localization in living cells using QSAR modeling. 1. Overview and models for probes of structure, properties and function in single cells. Biotechnic and Histochemistry. 2013 //;88(8):440-60.

Small molecule fluorochromes (synonyms: biosensors, chemosensors, fluorescent probes, vital stains) are widely used to investigate the structure, composition, physicochemical properties and biological functions of living cells, tissues and organisms. Selective entry and accumulation within particular cells and cellular structures are key processes for achieving these diverse objectives. Despite the complexities, probes routinely are applied using standard protocols, often without experimenter awareness of what factors that control accumulation and localization. The mechanisms of many such selective accumulations, however, now are known. Moreover, the influence of physicochemical properties of probes on their uptake and localization often can be defined numerically, hence predicted, using quantitative structure activity relations (QSAR) models with its required numerical structure parameters (or "descriptors"). The state of the art of this approach is described. Available QSAR models are summarized for uptake into cells and localization in the cytosol, endoplasmic reticulum, generic biomembranes, Golgi apparatus, lipid droplets, lysosomes/endosomes, mitochondria, eukaryotic nuclei (histones and DNA), plasma membrane, and ribosomal RNA (cytoplasmic and nucleolar). Integration of such core models to both aid understanding and troubleshooting of current fluorescent probes and to assist the design of novel probes is outlined and illustrated using case examples. Limitations and generic problems arising with this approach and comments on application of such approaches to xenobiotics other than probes, e.g., drugs and herbicides, together with a brief note about an alternative approach to prediction, are given. © 2013 The Biological Stain Commission.

99. Horobin RW, Stockert JC, Rashid-Doubell F. Uptake and localisation of small-molecule fluorescent probes in living cells: a critical appraisal of QSAR models and a case study concerning probes for DNA and RNA. Histochemistry and Cell Biology. 2013 //:1-15.

Small-molecule fluorochromes are used in biology and medicine to generate informative microscopic and macroscopic images, permitting identification of cell structures, measurement of physiological/physicochemical properties, assessment of biological functions and assay of chemical components. Modes of uptake and precise intracellular localisation of a probe are typically significant factors in its successful application. These processes and localisations can be predicted using quantitative structure activity relations (QSAR) models, which correlate aspects of the physicochemical properties of the probes (expressed numerically) with the uptake/localisation. Pay-offs of such modelling include better understanding and trouble-shooting of current and novel probes, and easier design of future probes ("guided synthesis"). Uptake models discussed consider adsorptive (to lipid or protein domains), phagocytic and pinocytotic endocytosis, as well as passive diffusion. Localisation models discussed include those for cytosol, endoplasmic reticulum, Golgi apparatus, lipid droplets, lysosomes, mitochondria, nucleus and plasma membrane. A case example illustrates how such QSAR modelling of probe interactions can clarify localisation and mode of binding of probes to intracellular nucleic acids of living cells, including not only eukaryotic chromatin DNA and ribosomal RNA, but also prokaryote chromosomes. © 2013 Springer-Verlag Berlin Heidelberg.

100. Jassim GA, Whitford DL. Quality of life of Bahraini women with breast cancer: a cross sectional study. BMC cancer. 2013;13:212. PubMed PMID: 23622020. Pubmed Central PMCID: PMC3644231. Epub 2013/04/30. eng.

BACKGROUND: Breast cancer can impact survivors in many aspects of their life. Scarce information is currently available on the quality of life of cancer survivors in Bahrain. The objective of this study is to describe the quality of life of Bahraini women with breast cancer and its association with their sociodemographic and clinical data. **METHODS:** This is a cross sectional study in which the European Organization for Research and Treatment of Cancer Quality of Life Cancer Specific version translated into Arabic was administered to a random sample of 337 Bahraini women with breast cancer. Relevant descriptive statistics were computed for all items. The equality of means across the categories of each categorical independent variable was tested using parametric tests (ANOVA and independent t-test) or non-parametric tests (Kruskal Wallis and Mann Whitney tests) of association where appropriate. **RESULTS:** Of the total sample, 239 consented to participation. The mean and median age of participants were 50.2 (SD +/- 11.1) and 48.0 respectively. Participants had a mean score for global health of 63.9 (95% CI 61.21-66.66). Among functional scales, social functioning scored the highest (Mean 77.5 [95% CI 73.65-81.38]) whereas emotional functioning scored the lowest (63.4 [95% CI 59.12-67.71]). The most distressing symptom on the symptom scales was fatigability (Mean 35.2 [95% CI 31.38-39.18]). Using the disease specific tool it was found that sexual functioning scored the lowest (Mean 25.9 [95% CI 20.23-27.90]). On the symptom scale, upset due to hair loss scored the highest (Mean 46.3 [95% CI 37.82-54.84]). Significant mean differences were noted for many functional and symptom scales. **CONCLUSION:** Bahraini breast cancer survivors reported favorable overall global quality of life. Factors associated with a major reduction in all domains of quality of life included the presence of metastases, having had a mastectomy as opposed to a lumpectomy and a shorter time elapsed since diagnosis. Poorest functioning was noted in the emotional and sexual domains. The most bothersome symptoms were fatigability, upset due to hair loss and arm symptoms. This study identifies the categories of women at risk of poorer quality of life after breast cancer and the issues that most need to be addressed in this Middle East society.

101. Loh KP, Ghorab H, Clarke E, Conroy R, Barlow J. Medical students' knowledge, perceptions, and interest in complementary and alternative medicine. Journal of Alternative and Complementary Medicine. 2013 //;19(4):360-6.

Background: Complementary and alternative medicine (CAM) is a growing industry in the health care system. In Ireland, to date there has not been a study that evaluates the knowledge of, interest in, and attitude of Irish medical students toward CAM. **Objectives:** This research can serve as a pilot study to inform Irish medical schools on the need to introduce CAM into the medical curriculum. **Materials and Methods:** The survey instrument was a modified design based on previously published studies carried out in other geographical areas. All medical students within the undergraduate and graduate entry programs (GEP) at the Royal College of Surgeons in Ireland were invited to participate in the study. SPSS software was used to analyze the results of the questionnaires. **Results:** The survey completion rate was 20.1%. A majority of students (78.4%) thought that CAM knowledge is important for their future career as physicians. Approximately 65% of students reported that they have not acquired sufficient knowledge about CAM from medical school, and 50.2% of students believe CAM should be incorporated into the medical curriculum. Preclinical years (49.4%) were suggested as the most appropriate time to learn about CAM. Knowledge of CAM modalities was generally rated as minimal or none by students. Among the 15 CAM modalities incorporated in the survey, massage, acupuncture, and meditation received the highest interest from students. Students who believe in a religion had a higher interest in CAM ($p < 0.05$). In terms of their personal view, massage, spirituality, and acupuncture received the highest positive responses. Attitudes toward CAM were positive from students. Lower willingness to use CAM was seen in clinical students ($p < 0.05$). **Conclusions:** It is important for the faculty of Irish medical schools to consider the possibility of integrating CAM education into the conventional medical curriculum in a systematic manner to better prepare students in their future career. © Copyright 2013, Mary Ann Liebert, Inc. 2013.

102. McDonald C, Whyte T, Taylor SM, Sanz S, Brechin EK, Gaynor D, et al. Progressive decoration of pentanuclear Cu(II) 12-metallacrown-4 nodes towards targeted 1- and 2D extended networks. CrystEngComm. 2013 //;15(34):6672-81.

The synthesis, structures and magnetic characterisation of a family of discrete planar pentanuclear Cu(II) 12-MC-4 metallacrowns of formulae [Cu₅(L₁)₄(MeOH)₄](ClO₄)₂ (1), [Cu₅(L₁)₄(py)₂](ClO₄)₂ (2), [Cu₅(L₁)₄(py)₆](ClO₄)₂ (3) and [Cu₅(L₂)₄(MeOH)₄](ClO₄)₂·H₂O (7) (where L₁H₂ = 2-(dimethylamino)phenylhydroxamic acid and L₂H₂ = 2-(amino)phenylhydroxamic acid) are reported. UV-vis and Electrospray MS studies indicate solution stability with respect to their {Cu₅(L₄)₂}²⁺ cores. Magnetic susceptibility measurements confirm strong antiferromagnetic exchange between the Cu(II) ions resulting in isolated S = 1/2 ground spin states. The introduction of ditopic co-ligands such as 4,4'-bipyridine (4,4'-bipy), pyrazine (pz) and 4,4'-azopyridine (4,4'-azp) results in their coordination at a number of axial Cu(II) sites within the {Cu₅}

103. Parsanezhad ME, Jahromi BN, Salarian L, Parsa-Nezhad M. Surgical management of a rare form of cervical dysgenesis with normal vagina, normal vaginal portion of the cervix and obstructed uterus. Archives of Iranian Medicine. 2013;16(4):246-8.

This case was an extremely rare form of cervical dysgenesis that presented with cyclic pain. Diagnostic laparoscopy and vaginoscopy showed the presence of a blind uterus at the level of the internal cervical os with a normal vagina and exocervix. Müllerian ducts are the embryologic origin for the uterus, cervix and upper part of the vagina. Müllerian duct migration initiates from the upper part of the Müllerian system. Therefore an obstructed uterus is usually associated with cervical and upper vaginal anomalies. This case was unusual because of the presence of an isolated segmental atresia at the level of the internal cervical os. However the vaginal portion of the cervix, vagina and urinary system were normal. We theorized that the absence of an appropriate fusion between the Müllerian duct and its underlying mesoderm, loss of cell-to-cell communication and special gene expression during a critical time period or a vascular accident between 12-22 weeks of gestation might have caused this anomaly. The patient underwent a laparotomy to create a utero-cervical canal using a peritoneal graft.

104. Reefy SA, Kameshki R, Sada DA, Elewah AA, Awadhi AA, Awadhi KA. Intracystic papillary breast cancer: A clinical update. ecanecermedicalsience. 2013;7(1).

Introduction: Intracystic (encysted) papillary cancer (IPC) is a rare entity of breast cancer accounting for approximately (1-2%) of all breast tumours [1], usually presenting in postmenopausal women and having an elusive natural history. The prediction of the biological behaviour of this rare form of breast cancer and the clinical outcome showed its overall favourable prognosis; however, its consideration as a form of ductal carcinoma in situ with non-invasive nature is to be reconsidered as it has been shown to present histologically with invasion of basement membrane and even metastasis [2]. The objective of this review is to shed some light on this rare, diagnostically challenging form of breast cancer, including its radiological, histological, and molecular characteristics and its pathological classification. The final goal is to optimize the clinical management including the role of sentinel lymph node biopsy (SLNB), general management with adjuvant radiotherapy (RT), mammary ductoscopy, and hormonal treatment. **Methods:** A literature review, facilitated by Medline, PubMed, and the Cochrane database, was carried out using the terms 'intracystic (encysted) papillary breast cancer'. **Results:** Intracystic papillary breast cancer (IPC) is best managed in the context of a multidisciplinary team. Surgical excision of the lump with margins in excess of 2 mm is considered satisfactory. Sentinel lymph node biopsy (SLNB) is recommended as data have shown the possibility of the presence of invasive cancer in the final histology. RT following IPC alone is of uncertain significance as this form of cancer is usually low grade and rarely recurs. However, if it is associated with DCIS or invasive cancer and found in young women, radiotherapy may be prudent to reduce local recurrence. Large tumours, centrally located or in cases where breast conserving surgery is unable to achieve a favourable aesthetic result, a skin sparing mastectomy with the opportunity for immediate reconstruction can be offered. Adjuvant endocrine therapy may be suggested as almost certainly these tumours are hormonal positive. **Conclusion:** Further research is required to determine the role of adjuvant radiotherapy and endocrine therapy in IPC. Understanding the low-grade nature of this form of breast cancer allows treatment options to be less radical and safely omitted. Copyright: © the authors.

105. Saleh LM, Hassan HA, Henari FZ, Patil PS, Bannur MS. Nonlinear refractive and optical limiting measurements of 2-thienylchalcone derivatives under cw laser regime. Applied Physics A: Materials Science and Processing. 2013:1-6.

The nonlinear refractive index of 2-thienylchalcone derivatives in solution was investigated using z-scan technique with a continuous wave Argon ion laser. The results show that 2-thienylchalcone derivatives exhibit a large nonlinear refractive index at 488 nm. The optical limiting behaviour based on nonlinear refractive index was also investigated. The fluorescence from the samples was recorded and the relationship between the variation of nonlinear refractive index values and optical limiting values with fluorescence intensity were investigated. The results indicated that 2-thienylchalcone derivatives could be promising candidates for application on nonlinear photonic devices. © 2013 Springer-Verlag Berlin Heidelberg.

106. Sharkawi M, Alfadhel HE, Burns MD, Given M, Lee MJ. Mid-term follow-up of stenting in chronic mesenteric ischaemia: a review of six cases. Irish Journal of Medical Science. 2013 //:1-5.

Background: Chronic mesenteric angina is a rare condition with high morbidity and mortality, which occurs due to stenosis or occlusion in the mesenteric vessels commonly due to atherosclerosis. Typically, patients present with worsening postprandial abdominal pain, chronic weight loss and fear of food. The condition can be treated by surgical bypass, but also by percutaneous transluminal angioplasty and stenting of the affected mesenteric arteries. Aim: To assess the mid-term outcomes in patients treated by endovascular stenting for chronic mesenteric ischaemia (CMI). Methods: Six patients were treated for symptomatic CMI. In total, six severely stenosed vessels were stented including the superior mesenteric artery (n = 5) and coeliac artery (n = 1). A retrospective review of these patients was performed with end points including symptom recurrence, major morbidity and mortality. The mean follow-up was 16.5 months (range 5-28 months). Results: Initial clinical success was observed in all six patients. Four patients were clinically asymptomatic, but died within 18 months after the procedure from other conditions. One patient suffered from recurrence of symptoms. Only one patient died as a consequence of mesenteric artery re-stenosis. Conclusion: Stenting of mesenteric vessels has shown excellent early and mid-term clinical success in selected patients. Though no direct comparison with open revascularization surgery was performed in this case series, technical and mid-term clinical success is promising. © 2013 Royal Academy of Medicine in Ireland.

107. Sridhar S, Al-Moallem B, Kamal H, Terrile M, Stallings RL. New insights into the genetics of neuroblastoma: Implications for diagnosis and therapy. Molecular Diagnosis and Therapy. 2013 //;17(2):63-9.

Neuroblastoma is a genetically and clinically heterogeneous tumor of childhood, arising from precursor cells of the sympathetic nervous system. It is still a challenging cancer for pediatric oncology, as some tumors will spontaneously regress, while others will become refractory to all forms of therapy. The clinical course of this disease is greatly influenced by both patient age and the genetic abnormalities that occur within the tumors. MYCN (v-myc myelocytomatosis viral related oncogene, neuroblastoma derived (avian)) amplification and loss of chromosome 11q heterozygosity have been known to be indicative of poor prognosis. In this article, we review how mutations and structural alterations in specific genes contribute to inheritable predisposition to neuroblastoma and/or to aggressive disease pathogenesis, as well as implications for diagnosis and therapy. These genes include PHOX2B (paired-like homeobox 2b), ALK (anaplastic lymphoma receptor tyrosine kinase), and ATRX (alpha thalassemia/mental retardation syndrome X-linked). © 2013 Springer International Publishing Switzerland.

108. Tierney E. The role of doctors as teachers. Bahrain Medical Bulletin. 2013 //;35(3).

109. Tierney E, Corbally MT. World Health Organization (WHO) surgical safety checklist. Bahrain Medical Bulletin. 2013;35(4).

110. van Zuuren E.J., Albusta A.Y., Fedorowicz Z., Carter B., Pijl H. Selenium Supplementation for Hashimoto's Thyroiditis: Summary of a Cochrane Systematic Review. Eur Thyroid J 2013.

Selenium supplementation in people with Hashimoto's thyroiditis might reduce antibody levels and result in a decreased dosage of levothyroxine (LT4) and may provide other beneficial effects (e.g. on mood and health-related quality of life). The aim of our systematic review was to assess the effects of selenium supplementation on Hashimoto's thyroiditis. We searched The Cochrane Library, MEDLINE, EMBASE and Web of Science for randomized controlled trials. Study selection, data extraction, assessment of risk of bias and analyses were carried out by two independent review authors. We assessed the quality of the evidence of included studies using GRADE. Four studies rated at unclear to high risk of bias comprising 463 participants were included. One study at high risk of bias showed statistically significant improvement in subjective well-being with sodium selenite 200 µg plus titrated LT4 compared with placebo plus titrated LT4 (RR 4.67, 95% CI 1.61-13.50). Selenomethionine 200 µg as a single treatment or combined with LT4 reduced the serum levels of anti-thyroid peroxidase antibodies compared with placebo (or placebo plus LT4) in three studies (p < 0.001). Although the changes from baseline were statistically significant in these three studies, their clinical relevance is unclear. In conclusion, the results of these four studies, assessed at unclear to high risk of bias, show that evidence to support or refute the efficacy of selenium supplementation in people with Hashimoto's thyroiditis is incomplete and not reliable to help inform clinical decision making.

110. Whately C, Mohamed Abdallah A, Alwatari YA. Management of large segmental tibial defects using locking IM nail and absorbable mesh. BMJ Case Reports. 2013 //.

Tibia accounts for the majority of open fractures with long segmental defects. The management of such defects imposes several challenges due to their associations with extensive soft tissue damage and high infection risk. In this report, we describe a new technique for the reconstruction of tibia in a young patient with 10 cm defect. The patient had a history of Gustilo Anderson type IIIB open fracture following a motorcycle accident. He was initially managed with multiple debridements and application of an external fixator. The defect was treated with the insertion of an antibiotic-coated intramedullary nail along with posterolateral bone grafting using an absorbable mesh. Six months postoperative, radiological assessment showed excellent callus formation diffusely around the intramedullary nail along with optimal alignment. The preliminary follow-up data are quite encouraging and the technique described in our case can be considered as a reasonable option in managing long segmental bone defects. Copyright 2013 BMJ Publishing Group.

112. Whitford DL, Al-Anjawi HA, Al-Baharna MM. Impact of clinical inertia on cardiovascular riskfactors in patients with diabetes. Primary Care Diabetes. 2013.

Aims: To determine whether clinical inertia is associated with simpler interventions occur-ring more often than complex changes and the association between clinical inertia and outcomes. **Methods:** Prevalence of clinical inertia over a 30 month period for hyperglycaemia, hypertension and dyslipidaemia was calculated in a random sample (n = 334) of patients attending diabetes clinic. Comparisons between prevalence of clinical inertia and outcomes for each condition were examined using parametric tests of association. **Results:** There was less clinical inertia in hyperglycaemia (29% of consultations) compared with LDL (80% of consultations) and systolic BP (68% of consultations). Consultations where therapy was intensified had a greater reduction in risk factor levels than when no change was made. No association was found between treatment intensity scores and changes in HbA1c, LDL or blood pressure over 30 months. **Conclusions:** Physicians are no more likely to intervene in conditions where simple therapeutic changes are necessary as opposed to complex changes. Greater clinical inertia leads to poorer outcomes. There continues to be substantial clinical inertia in routine clinical practice. Physicians should adopt a holistic approach to cardiovascular risk reduction in patients with diabetes, adhere more closely to established management guidelines and emphasize personal individualized target setting.

113. Whitford DL, Paul G, Smith SM. Patient generated "frequently asked questions": Identifying informational needs in a RCT of peer support in type 2 diabetes. Primary Care Diabetes. 2013 //.

Aims: The purpose of this study is to discuss the use of a system of patient generated "frequently asked questions" (FAQs) in order to gain insight into the information needs of participants. **Methods:** FAQs generated during group meetings taking place in a randomized controlled trial of peer support in type 2 diabetes are described in terms of their frequencies and topic areas. Data from focus groups and semi-structured interviews concerning the FAQs was subjected to content analysis. **Results:** 59/182 (33%) of the FAQs were directly related to the topic area of the scheduled peer support meeting with foot care, eyes and kidneys generating the most specific questions. The FAQs addressed mainly knowledge and concerns. The FAQs appeared to enhance peer support and also enabled participants to ask questions to experts that they may not have asked in a clinic situation. **Conclusions:** The use of FAQs to support peer supporters proved beneficial in a randomized controlled trial and may be usefully added to the tools used within a peer support framework. The use of FAQs provided valuable insight into the informal information needs of people with diabetes. Means of providing a similar structure in routine clinical care should be explored. © 2013 Primary Care Diabetes Europe.