Cancer Research 2017

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NCCCR and Cancer Services across HMC

المركز الوطني لعلاج وأبحاث السرطان
National Center for Cancer Care & Research

عضو في مؤسسة حمد الطبية
A Member of Hamad Medical Corporation

Cancer Research 2017

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Foreword

Dear Colleagues,

Hamad Medical Corporation is committed to developing excellence in comprehensive cancer services and across all specialties through the integration of clinical care, research and education at all levels, as outlined in the National Cancer Framework 2017-2022.

This booklet seeks to capture some of the cancer research and academic activities undertaken within Hamad Medical Corporation during 2017. We are aware it may not be comprehensive and we will always strive to improve on this in future editions.

Thank you to all who have contributed to these achievements. Together with our academic partners we are building an academic cancer research infrastructure in Qatar with international visibility.

K.R. Alexander Knuth
MD and CEO National Center for Cancer Care and Research, HMC
Chairman of Cancer Services, HMC

Editorial Team

We are delighted to be a part of this multi-disciplinary initiative. The newly established Cancer Clinical Trials Team at the Hamad Medical Corporation provide guidance and operational support to novice and experienced researchers seeking to set up and manage cancer clinical trials and other cancer clinical research projects.

The Cancer Clinical Trials Team is located at Hamad Bin Khalifa Medical City and provides a single point of contact for any queries about the conduct of cancer clinical research at HMC.

If you would like more information on cancer research, cancer clinical trials or have feedback regarding this publication, please contact us.

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Summary Charts

Table 1. Research Publications in 2017 compared to 2016

Publications	2017	2016
Original Research Articles	33 (24%)	26 (51%)
Case Reports/Series	15 (10%)	40 (33%)
Review/Book Chapters	13 (12%)	8 (10%)
Conference Papers	63 (54%)	5 (6%)
Active Projects	30	32
Total	124	79

Research Projects

There were 30 active research projects in 2017.

Research Output: Publications

A total of 124 research communications have been published or presented in national, regional, international journals or conferences during 2017. Of these 33 original research articles, 63 conference papers, 15 case reports/series, and 13 review articles.

Publications

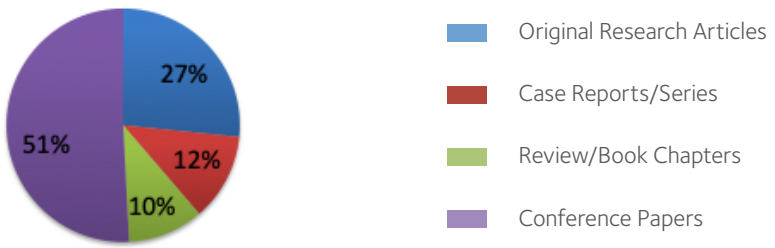

figure 1 Case Reports indexed in PubMed

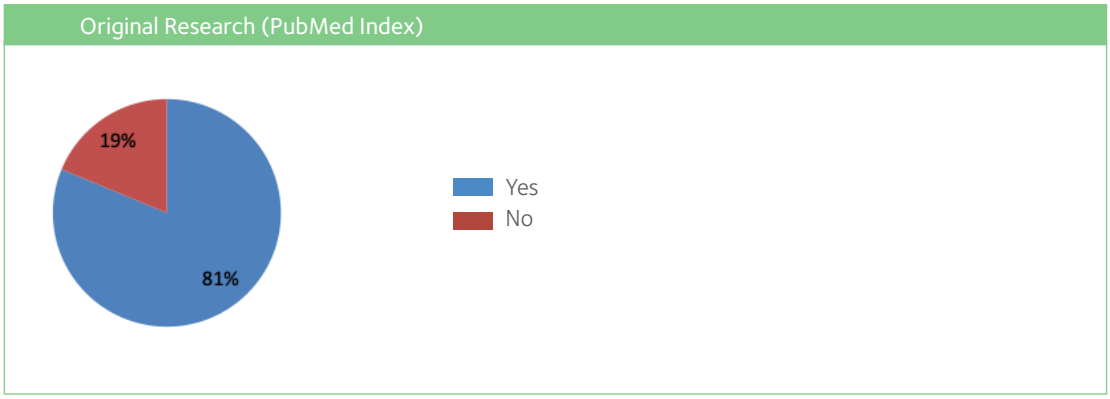

Figure 2 Original articles indexed in PubMed

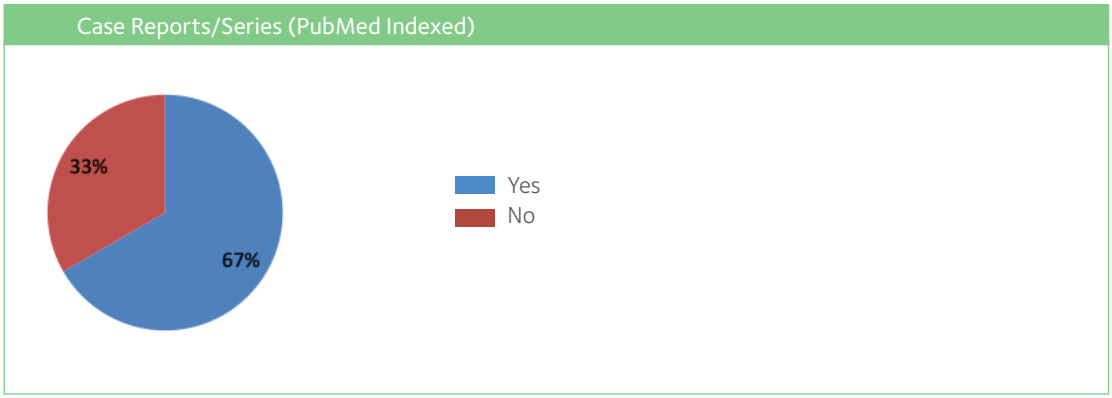

Figure 3 Case Reports/Series indexed in PubMed

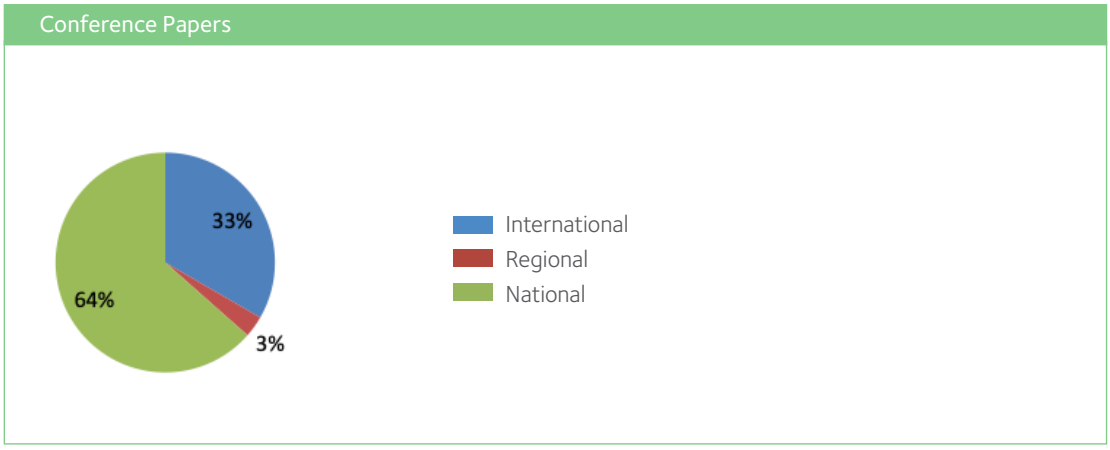

Figure 4 Scientific papers presented in national, Regional, and international conferences

Research Publications

Original Research Articles

Trends in oral anticoagulant use in Qatar: a 5-year experience

Authors: Elewa H[1], Alhaddad A[1], Al-Rawi S[1], Nounou A[2], Mahmoud H[3], Singh R[4].

[1]Clinical Pharmacy and Practice Section, College of Pharmacy, Qatar University, Doha, Qatar. [2]Pharmacy Department, National Center for Cancer Care & Research (NCCCR), Doha, Qatar. [3]Hamad General Hospital, Doha, Qatar. [4]Cardiology Research Center, Heart Hospital, HMC, Doha, Qatar

Abstract: In Qatar, dabigatran was introduced in 2011 followed by rivaroxaban in 2014. In this study, we aim to explore the trends in oral anticoagulant use in Qatar over the past 5 years and to what extent did DOACs replace warfarin. We also explored the extent of switching between different anticoagulants (from warfarin to DOACs and vice versa). We collected all anticoagulant prescriptions dispensed as in- or out-patient from 2011 to 2015 in all Hamad Medical Corporation (HMC) hospitals. Overall number of patients using warfarin, dabigatran and rivaroxaban over the last 5 years collectively was calculated. Per each calendar year, we calculated the number of all 3 OAC used (warfarin, dabigatran and rivaroxaban), frequency of use of each one of the OAC prescribed and compared the change in proportion of DOACs to warfarin prescriptions over the years. Overall, 6961 patients were using OAC over the past 5 years among which 5849 (84%) used warfarin, 496 (7.1%) used dabigatran and 616 (8.8%) used rivaroxaban. Oral anticoagulants use increased gradually from 2091 in 2011 to 3688 in 2015. Number of patients receiving DOACs increased significantly compared to warfarin [11 (0.5%) in 2011 vs. 849 (23%) in 2015 ($p < 0.0001$)]. Since its introduction in 2014, number of rivaroxaban users increased significantly compared to dabigatran [212 (40.9%) in 2014 vs. 544 (64.1%) in 2015]. DOACs have been gradually replacing warfarin in Qatar and the trend of their use is similar to that reported in other countries. Warfarin remains the most commonly used oral anticoagulant.

Keywords: Warfarin; Direct oral anticoagulants; Trends; Dabigatran; Rivaroxaban

Citation: Elewa, H., Alhaddad, A., Al-Rawi, S., Nounou, A., Mahmoud, H., & Singh, R. (2017). Trends in oral anticoagulant use in Qatar: a 5-year experience. *Journal of Thrombosis and Thrombolysis*, 43(3), 411-416.

Sociocultural Influences on Arab Women's Participation in Breast Cancer Screening in Qatar

Authors: Hwang J, Donnelly T, Ewashen C, McKiel E, Raffin S, Kinch J

University of Calgary, Calgary, Alberta, Canada

Abstract: Breast cancer, the most common cancer among Arab women in Qatar, significantly affects the morbidity and mortality of Arab women largely because of low participation rates in breast cancer screening. We used a critical ethnographic approach to uncover and describe factors that influence Arab women's breast cancer screening practices. We conducted semistructured interviews with 15 health care practitioners in Qatar. Through thematic analysis of the data, we found three major factors influencing breast cancer screening practices: (a) beliefs, attitudes, and practices regarding women's bodies, health, and illness; (b) religious beliefs and a culturally sensitive health care structure; and (c) culturally specific gender relations and roles. Arab women's health practices cannot be understood in isolation from the sociocultural environment. The problem of low rates of breast cancer screening practices and supportive interventions must be addressed within the context and not be limited to the individual.

Keywords: Qatar; cancer, breast; cancer, screening and prevention; ethnography; illness and disease, social construction; qualitative; women's health

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Citation: Hwang, J. J., Donnelly, T. T., Ewashen, C., McKiel, E., Raffin, S., & Kinch, J. (2017). Sociocultural influences on Arab women's participation in breast cancer screening in Qatar. *Qualitative Health Research*, 27(5), 714-726.

An assessment of reliability and validity of the European Organization for Research and Treatment of Cancer Quality of Life Questionnaire C30 among breast cancer patients in Qatar

Authors: Bener A[1,2,3], Alsulaiman R[4,5], Doodson L5, El Ayoubi HR[3,6]

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Abstract

Introduction: Breast cancer has been the most common cancer type that affects women worldwide and subsequent treatment is often associated with considerable psychological and quality of life (QoL). AIM: This study aimed to assess psychometric properties of the Arabic version of the European Organization for Research and Treatment of Cancer (EORTC) general QoL questionnaire (QLQ-C30) for breast cancer patients in Qatar. MATERIALS AND METHODS: This is a cross-sectional hospital-based study conducted on 678 breast cancer patients using Arabic version of the EORTC QLQ-C30 tool. RESULTS: The mean age of women was 47.7 ± 10.2 years and 33.4% of women had consanguineous parents. Six subscales out of the nine met the standards of reliability with coefficients ranging from 0.55 to 0.89. The mean score of all functioning scales was high >55. Advanced breast cancer stages of III-IV had higher symptomatic scores significantly than those in early stages for the physical function, cognitive, fatigue, insomnia, appetite loss, constipation, and financial difficulties. Correlation coefficients between each item ranged from -0.113 to 0.960, and item 21 (tense) and item 23 (irritable) had strongest negative correlations with their corresponding emotional functioning subscale, whereas items 29 (physical condition) and 30 (overall QoL) had the strongest positive correlation with Global Health/QoL subscale. Item 6 (limited work) showed a higher correlation with fatigue (r = 0.749). Likewise, item 19 (pain interfered with daily activities) of the pain subscale had higher correlations with physical functioning, role functioning, and fatigue subscales. CONCLUSION: Qatari Arabic version of the EORTC QLQ-C30 showed acceptable psychometric properties, which is a reliable and valid instrument, that can be used by oncologists.

Keywords: European Organization for Research and Treatment of Cancer and Quality of Life Questionnaire-C30; functional scale; internal consistency; oncology; quality of life; symptom scale; women.

Citation: Bener, A., Alsulaiman, R., Doodson, L., & El Ayoubi, H. R. (2017). An assessment of reliability and validity of the European Organization for Research and Treatment of Cancer Quality of Life Questionnaire C30 among breast cancer patients in Qatar. *Journal of Family Medicine and Primary Care*, 6(4), 824-831.

Validation of an Arabic Questionnaire for Symptom Assessment

Authors: Al-Shahri MZ[1], Al-Zahrani AS[1], Alansari A[2], Abdullah A[2], Alshaqi M[3], Matar A[4], Hassan A[5], Shoukri M[1], Sroor MY[1].

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Abstract

Introduction: Impeccable assessment of symptoms is central to palliative care (PC) practice. OBJECTIVES: The study objectives are (1) to test the validity of the Arabic Questionnaire for Symptom Assessment (AQSA) as a self-administered (SA) tool for assessing the severity of the listed symptoms among PC patients and (2) to test the validity of AQSA when completed by a proxy. METHODS: The AQSA is a tool for assessing the severity of 11 symptoms in addition to the overall suffering experience on a 0 to 10 numeric scale. Symptom scores on the SA AQSA were compared to scores obtained through interviews with patients. The same procedure was repeated with patients' sitters to explore the validity of using the tool for symptom assessment by proxy. RESULTS: The study involved 107 pairs (a patient and a sitter, each) with a mean age of 46.3 years (females 59.8%) for patients and 35.9 years (females 65.7%) for sitters. The correlation coefficient (r) for agreement between SA and interview-based (IB) scores for patients ranged from .65 ($P < .0001$) for drowsiness to .86 ($P < .0001$) for pain. The SA AQSA showed positive correlation between sitters' and patients' scores, with r ranging from .28 ($P = .004$) for depression to .62 ($P \leq .0001$) for vomiting. CONCLUSIONS: The strong positive correlation between SA and IB AQSA indicates that the former is a valid tool. When the SA AQSA is used by proxy, it showed moderate to strong positive correlation with patients' actual scores for most of the symptoms.

Keywords: Arabic; palliative care; proxy reporting; suffering; symptom assessment; validity

Citation: Al-Shahri, M. Z., Al-Zahrani, A. S., Alansari, A., Abdullah, A., Alshaqi, M., Matar, A., Shoukri M., Sroor, M. Y. (2017). Validation of an Arabic Questionnaire for Symptom Assessment. *American Journal of Hospice and Palliative Medicine®*, 34(4), 358-365.

Oncology nurses' perceptions of end-of-life care in a tertiary cancer centre in Qatar

Authors: Libo-On IL[1], Nashwan AJ[2]

[1]Registered Nurse, National Center for Cancer Care and Research (NCCCR), Hamad Medical Corporation, Qatar. [2]Nurse Research Scientist, NCCCR, Hamad Medical Corporation, Qatar Adjunct Senior Instructor, University of Calgary (Qatar).

Abstract

Background: Nurses who work in oncology settings may lack the knowledge and skills required for end-of-life (EoL) care. A clear understanding of nurses' perceptions of EoL care is crucial for the successful improvement of care for terminally ill patients with cancer. Although many studies have underlined nurses' perspectives on EoL care, this is the first such study conducted on oncology nurses in Qatar. PURPOSE: This study primarily sought to measure nurses' perceptions of EoL care at the National Center for Cancer Care and Research (NCCCR) in Qatar. Methods: A quantitative, cross-sectional, self-reported study. Nurses at the NCCCR reported their perceptions of EoL care using the Frommelt Attitudes Toward Care of the Dying (FATCOD) scale, which consisted of 30 items scored on a five-point Likert scale. Seventy-eight nurses working in oncology settings completed the tool. RESULTS: Approximately one third (33-35%) of the participants had positive perceptions of EoL care. The majority (67%) of the participants were uncertain or ambivalent regarding EoL events and situations. There was no significant relationship between the participants' profiles and their perceptions of EoL care. However, very few of them had completed educational courses in death and dying. CONCLUSION: Nurses have an important impact on EoL care, and continuous education is necessary to improve their confidence when they work with dying patients and their families. An in-house programme to help nurses cope with compassionate exhaustion and humanistic and relational care is highly recommended.

Keywords: Nursing; Oncology; Qatar

Citation: Libo-on, I. L. M., & Nashwan, A. J. (2017). Oncology nurses' perceptions of end-of-life care in a tertiary cancer centre in Qatar. *International Journal of Palliative Nursing*, 23(2), 66-73.

Hematopoietic stem cell transplantation in Qatar: One-year anniversary

Authors: Bakr M[1], Al-Hijji I[2], Menasria N[3], Merenkov Z[4], Al-Azzawi S[2], Taha R[2], Gulied A[2], Gillespie CA[2], Dermime S[5], Liakopoulou E[2], Knuth A[2]

[1]National Center for Cancer Care and Research (NCCCR), Hamad Medical Corporation (HMC), Doha, Qatar. [2]National Center for Cancer Care and Research (NCCCR), Hamad Medical Corporation (HMC), Doha, Qatar. [3]Cellular Therapy Laboratory, Hamad Medical Corporation (HMC), Doha, Qatar. [4]Transfusion Medicine and Blood Banks, Hamad Medical Corporation (HMC), Doha, Qatar. [5]Translational Cancer Research Facility (TCRF), National Center for Cancer Care and Research (NCCCR), Doha, Qatar.

Abstract

Background: Nurses who work in oncology settings may lack the knowledge and skills required for end-of-life (EoL) care. A clear understanding of nurses' perceptions of EoL care is crucial for the successful improvement of care for terminally ill patients with cancer. Although many studies have underlined nurses' perspectives on EoL care, this is the first such study conducted on oncology nurses in Qatar. PURPOSE: This study primarily sought to measure nurses' perceptions of EoL care at the National Center for Cancer Care and Research (NCCCR) in Qatar. Methods: A quantitative, cross-sectional, self-reported study. Nurses at the NCCCR reported their perceptions of EoL care using the Frommelt Attitudes Toward Care of the Dying (FATCOD) scale, which consisted of 30 items scored on a five-point Likert scale. Seventy-eight nurses working in oncology settings completed the tool. RESULTS: Approximately one third (33-35%) of the participants had positive perceptions of EoL care. The majority (67%) of the participants were uncertain or ambivalent regarding EoL events and situations. There was no significant relationship between the participants' profiles and their perceptions of EoL care. However, very few of them had completed educational courses in death and dying. CONCLUSION: Nurses have an important impact on EoL care, and continuous education is necessary to improve their confidence when they work with dying patients and their families. An in-house programme to help nurses cope with compassionate exhaustion and humanistic and relational care is highly recommended.

Keywords: Nursing; Oncology; Qatar

Citation: Libo-on, I. L. M., & Nashwan, A. J. (2017). Oncology nurses' perceptions of end-of-life care in a tertiary cancer centre in Qatar. *International Journal of Palliative Nursing*, 23(2), 66-73.

Quality of Working Life of Nurses in a Tertiary Cancer Center in Qatar

Authors: Nagammal S[1], Nashwan A[2], Nair S[1], Susmitha A[3]

[1]Nursing Department, National Center for Cancer Care & Research (NCCCR), Hamad Medical Corporation, Doha, Qatar. [2]Medical Oncology Department, National Center for Cancer Care & Research (NCCCR), Hamad Medical Corporation, Doha, Qatar. [3]Nursing Department, Regional Cancer Centre, Thiruvananthapuram, India.

Abstract

Background: Nurses are the largest segment of professionals working in the healthcare industry, and a satisfactory quality of working life will empower them to provide the highest quality care to their patients. Aim To assess the quality of working life among nurses in a tertiary cancer care center in Qatar concerning the following variables; control at work, employee engagement, general well-being, home-work interface, job/career satisfaction, stress at work, and working conditions. Methods A cross-sectional, descriptive study was conducted to assess the QoWL among 146 Staff Nurses working in different units of a tertiary cancer center in Qatar. A Quality of Work life Scale, a seven-point Likert's scale was used, were nurses self-reported their QoWL. Results The mean age of the study participants were 36.48 years ± 6.74, and mean total years of clinical experience in nursing and clinical experience at the center was 14.16 years and 7.65 years respectively. The majority (69.9%) of the nurses who participated in the study were working in inpatient units. Around fifty-four percentage were graduate nurses. A vast majority (89.7%) of the respondents were married and among them, 84.2% of nurses lived with their family. Nurses' perception of the factors associated with QoWL including control and stress at work were found average, and others such as employee engagement, general well-being, homework interface, job/career satisfaction, working condition, and overall quality of work life were considered good. There was no statistically significant difference in the QoWL scores and participants' characteristics (P>0.05). Conclusion The overall QoWL was found to be good for the Oncology Nurses working at a cancer center in Qatar. However, Nurses reported having varying degrees of stress at work. Nurses require highly specialized clinical competencies to accurately determine patients' states and predict and cope with difficulties that may occur during treatment.

Keywords: Quality of Working Life (QoWL), Nursing, Job Satisfaction, Cancer, Qatar

Citation: Nagammal, S., Nashwan, A. J., Nair, S. L., & Susmitha, A. (2017). Quality of working life of nurses in a tertiary cancer center in Qatar. *Global Journal of Medicine and Public Health*, 6(1), 1.

Satisfaction with a 2-day communication skills course culturally tailored for medical specialists in Qatar

Authors: Bylund CL[1], Alyafei K[2], Afana A[3], Al-Romaihi S[4], Yassin M[5], Elnashar M[6], Al-Arab B[1], Al-Khal A[1]

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Abstract

Objective: Health-care communication skills training may be particularly needed in the Arabian Gulf countries because of the variety of cultures within the physician and patient populations. This study describes the implementation and results of a communication skills training program for physicians in Qatar that assessed previous training, and effect of previous training on participants' course evaluations. MATERIALS AND METHODS: We conducted a 2-day communication skills training course covering seven culturally adapted modules. Educational strategies included large and small group work with the standardized patient, demonstration videos, and lectures. At the end, participants completed a course evaluation survey. Data analysis performed with SPSS; frequencies and percentages were calculated, and Chi-square test applied to evaluate statistical significance. Results: A total of 410 physicians in Qatar have participated in the course over a period of 2 years. Evaluation ratings of the course were high. Participants rated the module on Breaking Bad News as the most useful, and the small group role-play as the most helpful course component. One-third of participants had previously participated in experiential communication skills training. There was no association between previous experience and evaluation of the course. CONCLUSION: Physicians in Qatar positively evaluated a 2-day communication skills course, though the majority of participants did not have any previous exposure to experiential communication skills training.

Keywords: Communication skills; faculty development; medical education; physician-patient communication

Citation: Bylund, C. L., Alyafei, K., Afana, A., Al-Romaihi, S., Yassin, M., Elnashar, M., Al-Arab, B., Al-Khal, A. (2017). Satisfaction with a 2-day communication skills course culturally tailored for medical specialists in Qatar. *Journal of Family and Community Medicine, 24*(2), 122.

Depression, Hopelessness and Social Support among Breast Cancer Patients: in Highly Endogamous Population

Authors: Bener A[1,2], Alsulaiman R[3,4], Doodson L[4], Agathangelou T[4]

[1]Department of Biostatistics and Medical Informatics, CerrahpaĐa Faculty of Medicine, Istanbul University, Istanbul, Turkey.[2]Department of Evidence for Population Health Unit, School of Epidemiology and Health Sciences, University of Manchester, Manchester.[3]Department of Oncology and Hematology, National Center for Cancer Care & Research, Hamad Medical Corporation, Qatar.[4]Regent's University, Inner Circle, Regent's Park, London NW1 4NS, UK.

Abstract

Aim: The aim of this study was to assess the relationship between different demographic variables, hopelessness, depression and social support of Breast cancer patients in Qatari's population. DESIGN: This is an observational cohort hospital based study. SUBJECTS AND METHODS: The study included 678 breast cancer patients. The questionnaires included a demographic questionnaire, the Beck Hopelessness Scale (BHS), Back Depression Scale (BDS) and Multidimensional Scale of Perceived Social Support (MSPSS). The demographic questionnaire was used to assess patients' basic information including gender, age, marital status, education, family size, and place of residence. Medical information regarding cancer stage, the time passed since diagnosis, treatment, and duration of disease were recorded. RESULTS: The mean age of the studied women was 47.7±10.2 years. Among the studied patients, 34.7% were Qataris and 65.3% were Arab expatriates. Nearly 39.2% of the patients were in pre-menopausal status and 60.8% in post-menopausal status. 86.1% of women were married. 14.6% were illiterate women, 20.9% were university graduates and 37.2% were housewives. Smoking habit was less common in studied Arab women (9.1%), but, sheesha smoking was more common, 17.7%. Daily physical activity indicated 25.7% were walking 30 minutes per-day and 14% were walking 60 minutes per day. 30.4% of them had consanguineous parents. Breast feeding was practiced among 67.7% of women and over 73% were considered overweight and obese. Furthermore, over 75% of breast cancer women were at the Stage 3 (40.9%) and Stage 4 (35.8%) of cancer. The percentage of patients who underwent mastectomy and lumpectomy were 49.3 % and 50.7%, respectively. It was observed that 27.7% of BDI patients had moderate depression and 19.5% of the BDI patients had severe depression and with mean and standard deviation 25.1±7.7. Also, the mean and SD of BDI for consanguineous has showed statistically significant 28.4±5.7 than non- consanguineous 23.2± 8.0 ($p<0.001$). All socio-demographic variables showed statistically significant differences with the total BHS score. The highest score belongs to the family sub-dimension. CONCLUSION: The present study indicates that hopelessness of the patients with breast cancer decreased with the increase in their social support. Therefore, activating patient social support systems is of importance in increasing their levels of hope. The present study revealed the coexistence of the socio-demographic, physical, psychological, and cognitive problems faced by patients with cancer.

Keywords: Breast cancer; lifestyle; consanguinity; hopelessness; depression and Social Support

Citation: Bener, A., Alsulaiman, R., Doodson, L., & Agathangelou, T. (2017). Depression, hopelessness and social support among breast cancer patients: in highly endogamous population. *Asian Pacific Journal of Cancer Prevention: APJCP, 18(7),* 1889.

MRI Reduces Variation of Contouring for Boost Clinical Target Volume in Breast Cancer Patients without Surgical Clips in the Tumour Bed

Authors: Al-Hammadi N, Caparrotti P, Divakar S, Riyas M, Chandramouli SH, Hammoud R, Hayes J, Mc Garry M, Paloor SP, Petric P

Department of Radiation Oncology, National Center for Cancer Care and Research, Hamad Medical Corporation, Doha, Qatar.

Abstract

Background: Omitting the placement of clips inside tumour bed during breast cancer surgery poses a challenge for delineation of lumpectomy cavity clinical target volume (CTVLC). We aimed to quantify inter-observer variation and accuracy for CT- and MRI-based segmentation of CTVLC in patients without clips.
Patients and Methods: CT- and MRI-simulator images of 12 breast cancer patients, treated by breast conserving surgery and radiotherapy, were included in this study. Five radiation oncologists recorded the cavity visualization score (CVS) and delineated CTVLC on both modalities. Expert-consensus (EC) contours were delineated by a senior radiation oncologist, respecting opinions of all observers. Inter-observer volumetric variation and generalized conformity index (CIgen) were calculated. Deviations from EC contour were quantified by the accuracy index (AI) and inter-delineation distances (IDD). RESULTS: Mean CVS was 3.88 +/- 0.99 and 3.05 +/- 1.07 for MRI and CT, respectively (p = 0.001). Mean volumes of CTVLC were similar: 154 +/- 26 cm3 on CT and 152 +/- 19 cm3 on MRI. Mean CIgen and AI were superior for MRI when compared with CT (CIgen: 0.74 +/- 0.07 vs. 0.67 +/- 0.12, p = 0.007; AI: 0.81 +/- 0.04 vs. 0.76 +/- 0.07; p = 0.004). CIgen and AI increased with increasing CVS. Mean IDD was 3 mm +/- 1.5 mm and 3.6 mm +/- 2.3 mm for MRI and CT, respectively (p = 0.017). CONCLUSIONS: When compared with CT, MRI improved visualization of post-lumpectomy changes, reduced interobserver variation and improved the accuracy of CTVLC contouring in patients without clips in the tumour bed. Further studies with bigger sample sizes are needed to confirm our findings.

Keywords: CT; MRI; breast cancer; contouring; contouring variation

Citations: Al-Hammadi, N., Caparrotti, P., Divakar, S., Riyas, M., Chandramouli, S. H., Hammoud, R., Hayes, J., Mc Garry, M., Paloor, SP., Petric, P. (2017). MRI reduces variation of contouring for boost clinical target volume in breast cancer patients without surgical clips in the tumour bed. *Radiology and Oncology, 51*(2), 160-168

Environmental Factors Influencing Arab Qatari Women's Breast Cancer Screening: Health Care Practitioners' Perspective

Authors: Hwang J, Donnelly T, Ewashen C, McKiel E

University of Calgary, Qatar

Abstract

Breast cancer, the most common cancer among Arab women in Qatar, significantly affects the morbidity and mortality of Arab women largely because of delayed diagnosis related to low participation rates in breast cancer screening (BCS). To understand the reasons for the low participation rates, a critical ethnographic study was conducted with 15 health care practitioners in Qatar. Thematic analysis of the interview data resulted in identification of environmental factors influencing participation in BCS: (a) gender friendly health care services, (b) lack of a national BCS protocol, (c) time constraints, (d) deficiencies in the patient health records system, (e) cost for mammograms, and (f) transportation. A recurring theme across the factors was that, from the perspective of health care practitioners, Arab women's health cannot be understood in isolation from the environment in which they live. Interventions that promote BCS practices must address the contextual factors that impact health of the population.

Keywords: breast cancer, prevalence, screening and prevention, Arab Qatari women's health, Middle East, ethnography

Citation: Hwang, J. J., Donnelly, T. T., Ewashen, C., & McKiel, E. (2017). Environmental Factors Influencing Arab Qatari Women's Breast Cancer Screening: Health Care Practitioners' perspective. International Journal of Nursing Student Scholarship, 4, 1-16.

Primary care physicians' attitudes and beliefs about cancer clinical trials

Authors: Bylund CL[1,2,3], Weiss ES[4], Michaels M[5], Patel S[6], D'Agostino TA[1], Peterson EB[7], Binz-Scharf MC[8], Blakeney N[9], McKee MD[10]

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Abstract

Background/Aims: Cancer clinical trials give patients access to state-of-the-art treatments and facilitate the translation of findings into mainstream clinical care. However, patients from racial and ethnic minority groups remain underrepresented in clinical trials. Primary care physicians are a trusted source of information for patients, yet their role in decision-making about cancer treatment and referrals to trial participation has received little attention. The aim of this study was to determine physicians' knowledge, attitudes, and beliefs about cancer clinical trials, their experience with trials, and their interest in appropriate training about trials.
Methods: A total of 613 physicians in the New York City area primarily serving patients from ethnic and racial minority groups were invited via email to participate in a 20-min online survey. Physicians were asked about their patient population, trial knowledge and attitudes, interest in training, and personal demographics. Using calculated scale variables, we used descriptive statistical analyses to better understand physicians' knowledge, attitudes, and beliefs about trials. RESULTS: A total of 127 physicians completed the survey. Overall, they had low knowledge about and little experience with trials. However, they generally had positive attitudes toward trials, with 41.4% indicating a strong interest in learning more about their role in trials, and 35.7% indicating that they might be interested. Results suggest that Black and Latino physicians and those with more positive attitudes and beliefs were more likely to be interested in future training opportunities.
Conclusion: Primary care physicians may be an important group to target in trying to improve cancer clinical trial participation among minority patients. Future work should explore methods of educational intervention for such interested providers.

Keywords: Cancer clinical trials; clinical trials knowledge; minority patients; primary care physicians

Citation: Bylund, C.L., Weiss, E.S., Michaels, M., Patel, S., D'Agostino, T.A., Peterson, E.B., Binz-Scharf, M.C., Blakeney, N., McKee, M.D., (2017). Primary care physicians' attitudes and beliefs about cancer clinical trials. *Clinical Trials, 14*(5), 518-525.

Assessing Breast Cancer Risk Estimates Based on the Gail Model and Its Predictors in Qatari Women

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Abstract

Background: The Gail model is the most widely used breast cancer risk assessment tool. An accurate assessment of individual's breast cancer risk is very important for prevention of the disease and for the health care providers to make decision on taking chemoprevention for high-risk women in clinical practice in Qatar. AIM: To assess the breast cancer risk among Arab women population in Qatar using the Gail model and provide a global comparison of risk assessment.
Subjects and Methods: In this cross-sectional study of 1488 women (aged 35 years and older), we used the Gail Risk Assessment Tool to assess the risk of developing breast cancer. Sociodemographic features such as age, lifestyle habits, body mass index, breast-feeding duration, consanguinity among parents, and family history of breast cancer were considered as possible risks. RESULTS: The mean age of the study population was 47.8 ± 10.8 years. Qatari women and Arab women constituted 64.7% and 35.3% of the study population, respectively. The mean 5-year and lifetime breast cancer risks were 1.12 ± 0.52 and 10.57 ± 3.1, respectively. Consanguineous marriage among parents was seen in 30.6% of participants. We found a relationship between the 5-year and lifetime risks of breast cancer and variables such as age, age at menarche, gravidity, parity, body mass index, family history of cancer, menopause age, occupation, and level of education. The linear regression analysis identified the predictors for breast cancer in women such as age, age at menarche, age of first birth, family history and age of menopausal were considered the strong predictors and significant contributing risk factors for breast cancer after adjusting for ethnicity, parity and other variables.
Conclusion: The current study is the first to evaluate the performance of the Gail model for Arab women population in the Gulf Cooperation Council. Gail model is an appropriate breast cancer risk assessment tool for female population in Qatar.

Keywords: Arab women; Gail model risk assessment; breast cancer; consanguinity; lifestyle; predictor; risk factors

Citation: Bener, A., Çatan, F., El Ayoubi, H. R., Acar, A., Ibrahim, W. H. (2017). Assessing breast cancer risk estimates based on the Gail model and its predictors in Qatari women. *Journal of Primary Care and Community Health, 8*(3), 180-187.

Central line-associated bloodstream infection in pediatric oncology patients in Qatar: A prospective study

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Abstract

Background: The Gail model is the most widely used breast cancer risk assessment tool. An accurate assessment of individual's breast cancer risk is very important for prevention of the disease and for the health care providers to make decision on taking chemoprevention for high-risk women in clinical practice in Qatar. AIM: To assess the breast cancer risk among Arab women population in Qatar using the Gail model and provide a global comparison of risk assessment.

Subjects and Methods: In this cross-sectional study of 1488 women (aged 35 years and older), we used the Gail Risk Assessment Tool to assess the risk of developing breast cancer. Sociodemographic features such as age, lifestyle habits, body mass index, breast-feeding duration, consanguinity among parents, and family history of breast cancer were considered as possible risks. RESULTS: The mean age of the study population was 47.8 ± 10.8 years. Qatari women and Arab women constituted 64.7% and 35.3% of the study population, respectively. The mean 5-year and lifetime breast cancer risks were 1.12 ± 0.52 and 10.57 ± 3.1, respectively. Consanguineous marriage among parents was seen in 30.6% of participants. We found a relationship between the 5-year and lifetime risks of breast cancer and variables such as age, age at menarche, gravidity, parity, body mass index, family history of cancer, menopause age, occupation, and level of education. The linear regression analysis identified the predictors for breast cancer in women such as age, age at menarche, age of first birth, family history and age of menopausal were considered the strong predictors and significant contributing risk factors for breast cancer after adjusting for ethnicity, parity and other variables.

Conclusion: The current study is the first to evaluate the performance of the Gail model for Arab women population in the Gulf Cooperation Council. Gail model is an appropriate breast cancer risk assessment tool for female population in Qatar.

Keywords: Arab women; Gail model risk assessment; breast cancer; consanguinity; lifestyle; predictor; risk factors

Citation: Bener, A., Çatan, F., El Ayoubi, H. R., Acar, A., Ibrahim, W. H. (2017). Assessing breast cancer risk estimates based on the Gail model and its predictors in Qatari women. *Journal of Primary Care and Community Health, 8*(3), 180-187.

Liver Iron Content (LIC) in Adults with Sickle Cell Disease (SCD): Correlation with Serum Ferritin and Liver Enzymes Concentrations in Transfusion Dependent (TD-SCD) and Non-Transfusion Dependent (NT-SCD) Patients

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Abstract

Introduction: Sickle cell disease (SCD) is one of the leading causes of morbidity and mortality worldwide, causing damage and dysfunction in multiple organs. The complications of this disease are numerous, affect every organ and/or tissue in the body and vary considerably among patients over the time challenging its management.
The Aim of our Study: To determine the iron status of 17 patients with non-transfusion-dependent sickle cell disease (NT-SCD) patients and six patients with transfusion dependent sickle cell disease (TD- SCD) using both serum ferritin level (SF) and Ferriscan® evaluation of liver iron content (LIC). We correlated the values of LIC with SF levels and some hepatic enzymes (alanine transaminase-ALT, aspartate aminotransferase -AST, alkaline phosphatase -ALP and albumin). RESULTS: 17 adults with NT-SCD (n = 17, age: 32±15 years) were studied. Seven of NT-SCD had SF > 500 µg/L, 4 out of the seven had high liver iron measured by FerriScan® (> 30 mg/g/ tissue dry weight - dw). Two patients had high LIC despite a concomitant SF concentration < 500 µg/L. Two patients had high SF (1.117 µg/L and 675 µg/L) while their LIC was normal (< 30 mg/g/dw). Five patients had elevated ALT and/or AST) concentrations. In TD-SCD (n = 6, age = 25 ± 11 years), 2 patients had SF <500 µg/L, one of them had high LIC (127 mg/g/DW). Liver enzymes were high in two patients. SF concentration correlated significantly with LIC ($r = 0.85$, $p < 0.001$). Neither SF level nor LIC was correlated significantly with hepatic enzyme levels.
Conclusions: A significant number of our patients with NT-SCD had high LIC, high SF and elevated liver enzymes (ALT and AST). Despite some limitations of our study, due to the limited number of NT-SCD patients, these findings have important clinical implications. Therefore, we recommend measuring SF and LIC in NT-SCD patients to apply preventive measures with iron chelation therapy in patients with high LIC.

Keywords: Ferriscan; Ferritin; Iron Overload; Liver Iron Content; Sickle Cell Disease

Citation: Yassin, M., Soliman, A., De Sanctis, V., Nashwan, A., Abusamaan, S., Moustafa, A., Kohla, S., Soliman, D. (2017). Liver iron content (LIC) in adults with sickle cell disease (SCD): correlation with serum ferritin and liver enzymes concentrations in trasfusion dependent (TD-SCD) and non-transfusion dependent (NT-SCD) patients. *Mediterranean Journal of Hematology and Infectious Diseases*, 9(1), 1-6.

A new monoclonal antibody detects downregulation of protein tyrosine phosphatase receptor type Ð in chronic myeloid leukemia patients

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Abstract

Background: Protein tyrosine phosphatase receptor gamma (PTPRG) is a ubiquitously expressed member of the protein tyrosine phosphatase family known to act as a tumor suppressor gene in many different neoplasms with mechanisms of inactivation including mutations and methylation of CpG islands in the promoter region. Although a critical role in human hematopoiesis and an oncosuppressor role in chronic myeloid leukemia (CML) have been reported, only one polyclonal antibody (named chPTPRG) has been described as capable of recognizing the native antigen of this phosphatase by flow cytometry. Protein biomarkers of CML have not yet found applications in the clinic, and in this study, we have analyzed a group of newly diagnosed CML patients before and after treatment. The aim of this work was to characterize and exploit a newly developed murine monoclonal antibody specific for the PTPRG extracellular domain (named TPY B9-2) to better define PTPRG protein downregulation in CML patients.
Methods: TPY B9-2 specifically recognizes PTPRG (both human and murine) by flow cytometry, western blotting, immunoprecipitation, and immunohistochemistry. RESULTS: Co-localization experiments performed with both anti-PTPRG antibodies identified the presence of isoforms and confirmed protein downregulation at diagnosis in the Philadelphia-positive myeloid lineage (including CD34+/CD38bright/dim cells). After effective tyrosine kinase inhibitor (TKI) treatment, its expression recovered in tandem with the return of Philadelphia-negative hematopoiesis. Of note, PTPRG mRNA levels remain unchanged in tyrosine kinase inhibitors (TKI) non-responder patients, confirming that downregulation selectively occurs in primary CML cells.
Conclusions: The availability of this unique antibody permits its evaluation for clinical application including the support for diagnosis and follow-up of these disorders. Evaluation of PTPRG as a potential therapeutic target is also facilitated by the availability of a specific reagent capable to specifically detect its target in various experimental conditions.

Keywords: BCR-ABL1; Chronic myeloid leukemia; Monoclonal antibody; Protein tyrosine phosphatase; Tumor suppressor gene

Citation: Vezzalini, M., Mafficini, A., Tomasello, L., Lorenzetto, E., Moratti, E., Fiorini, Z., Holyoake, TL., Pellicano, F., Krampera, M., Tecchio, C., Yassin, M., Al-Dewik, N., Ismail, MA., Al Sayab, A., Monne, M., Sorio, C. (2017). A new monoclonal antibody detects downregulation of protein tyrosine phosphatase receptor type Y in chronic myeloid leukemia patients. *Journal of hematology and Oncology, 10*(1), 1-11.

Perceptions of Arab men regarding female breast cancer screening examinations-Findings from a Middle East study

Authors: Donnelly TT[1], Al-Khater AH[2], Al-Bader SB[2], Al-Kuwari MG[3], Abdul Malik MA[4], Al-Meer N[5], Singh R[6]

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Abstract

Objectives: In the Middle East, Qatar in particular, the incidence of breast cancer has substantially increased in recent years, and is expected to double by 2030. This diagnosis also occurs at a later stage in the disease. Early detection along with proper treatment reduces radical mastectomy and mortality rates, yet only one-third of Arab women in Qatar participate in breast cancer screening (BCS) activities of any sort. Many women in the conservative Qatari society rely on male family members for support and protection. This study investigates the attitudes and perceptions of Arab men in regards to breast cancer screening and what they see as both incentives and barriers to women's participation in BCS activities.

Design: A qualitative methodology using purposive sampling technique was chosen in order to explore participant's attitudes, beliefs and health-related actions. Individual in-depth interviews with open-ended questions were conducted with 50 Arab men during October 2011 to May 2012. Data collection, analysis, and interpretation occurred simultaneously. NVivo 9, a qualitative data analysis software program was used to organize themes and subthemes.

Results: It was found that most men understood the importance of regular BCS in early detection of breast cancer. They felt they had an important role in encouraging the women in their lives to participate in BCS activities, but were adamant that any examination must be done by a female health care professional. Few knew details about screening guidelines in Qatar, but most had a basic knowledge of some screening activities. Most indicated an interest in learning more about BC and screening activities in order to better help and inform their female family members.

Conclusion: Because Arab men perceive that their opinions and support are a major factor influencing female family members' participation in breast cancer screening, it is important that any program instituted to increase such screening participation be aimed at both men and women. More information is needed by both sexes as to the need for and benefits of regular screening activities, the techniques used, and the newly revised guidelines in Qatar. Such a program needs to be introduced in the near future in order to avert, at least partially, the expected doubling in breast cancer cases by 2030 in the Middle East.

Citation: Donnelly, T. T., Al-Khater, A. H., Al-Bader, S. B., Al-Kuwari, M. G., Malik, M. A. A., Al-Meer, N., & Singh, R. (2017). Perceptions of Arab men regarding female breast cancer screening examinations—Findings from a Middle East study. *PloS One, 12*(7), 1-24.

Qatar's Experience with Hereditary Breast and Ovarian Cancer and High Risk Clinic: A Retrospective Study 2013-2016

Authors: Bujassoum SM, Bugrein HA, Alsulaiman R, Ghazouani H

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Abstract

Introduction: Approximately 5%-10% of breast cancer is hereditary and BRCA1 and BRCA2 genes are responsible for most of the cases. In the State of Qatar, the cancer genetics program was established at National Center of Cancer Care and Research on 2013 which is considered the first of its kind in the region dedicated exclusively to providing genetic counseling, risk assessment and management of high risk patients and their families. In this study, we aim to describe our experience with the hereditary cancer and high risk clinic from the period of March 2013 until December 2016.Methods: In this retrospective study, a total of 697 patients were evaluated at the high risk clinic between March 2013 to December 2016. High risk patients were either placed under surveillance or offered genetic testing for the BRCA genes. Results: A total of 697 patients were evaluated at the high risk clinic in which 347 patients were considered eligible for high risk screening. 167 patients pursued genetic testing and 64 patients (38%) had BRCA mutations with BRCA1 being the most common, while 72 patients (43%) were BRCA negative. A total of 31 patients (19%) had variants of unknown significance in the BRCA genes. Most of the BRCA positive patients 63% were affected with either breast and/or ovarian cancers and were within younger age group, while 38% were unaffected. 55% of those BRCA positive affected patients had triple negative breast cancer. The prevalence of BRCA mutations among Qatari breast cancer patients reaches up to 10% while it reaches approximately 3.5% among non-Qatari breast cancer patients. Conclusion: Our program is an example of a well-established and multidisciplinary service targeted toward prevention and personalized medicine in high risk patients that goes in line with Qatar's 2022 vision of achieving excellence in cancer care. From our unique experience, we show that BRCA mutations are prevalent among Qatari breast cancer patients reaching approximately 10% which can partially explain the young onset diagnosis of breast cancer in Qatar. With the higher awareness about our service and the recent establishment of BRCA testing at HMC, it is believed that the prevalence of BRCA is going to increase. In addition, with the introduction of multigene panel at our clinic, we believe that it will provide us.

Citation: Bujassoum, S. M., Bugrein, H. A., Al-Sulaiman, R. J., Ghazouani, H. (2017). Qatar's Experience with Hereditary Breast and Ovarian Cancer and High Risk Clinic: A Retrospective Study 2013-2016. *International Journal of Research - GRANTHAALAYAH 5*(10), 185-196.

Genotype and Phenotype Correlation of Breast Cancer in BRCA Mutation Carriers and Non-Carriers

Authors: Bujassoum SM, Bugrein HA, Al-Sulaiman R

National Center for Cancer Care & Research, Doha, Qatar.

Abstract

Introduction: Breast cancer is both genetically and histopathologically heterogeneous disease. The biological basis for this heterogeneity is unknown, although there are some distinct phenotype-genotype correlations. Approximately 5% to 10% of breast cancer is hereditary and BRCA1 and BRCA2 genes are responsible for the majority of the hereditary cases of breast cancer. According to the existing literature BRCA1 and BRCA2 associated breast cancer, it has been shown that BRCA associated breast cancers have different clinical, histological and immune-phenotypic features. To validate the effect of BRCA 1 or BRCA 2 germ line mutations on breast cancer aggressiveness and its impact on breast cancer clinical and histological features, we compared the histological, molecular status and clinical variables of 32 breast cancer patients with BRCA gene pathogenic mutations carriers and to the histopathological and molecular characteristics of 50 patients affected with breast cancer in the same age group but with no pathogenic mutations or variants of unknown significant (VUS) in either BRCA1 or BRCA2 genes. Methods: A retrospective study was conducted to study breast cancer cases that were evaluated at the hereditary breast and ovarian cancer clinic at the national center of cancer care and research (NCCCR) in the State of Qatar from 2013 to 2015. Review of medical records was conducted to determine the clinical characteristics, the molecular results of BRCA testing and the tumor characteristics from the histopathology reports in addition to a new review of the tumor blocks to update the molecular data of those patients. Results: (82) patients with breast cancer were diagnosed at a young age (50 years of age and younger). (50) patients were BRCA negative and (32) patients were i positive. (22) Patients were found to have BRCA1 pathogenic mutations, (9) patients had BRCA2 pathogenic mutations and (1) patient carried pathogenic mutations in both BRCA1 and BRCA2 genes. Most patients had mutations in the BRCA1 with most mutations being small frame shift deletion or insertion in one or more exons that caused protein truncation. BRCA mutations was detected among women of younger ages. In terms of histopathology, the majority of BRCA associated breast cancers are invasive ductal carcinoma (IDC) detected in 94% with (74%) high nuclear grade 3/3, have a higher number of mitosis and show a high frequency of necrotic areas, and a higher proliferative rate and lymphocytic infiltration. All of these histopathological features point toward a more aggressive tumor type. In terms of immunohistochemical (IHC) tumor markers, triple negative detected in 56.3% accounted for most of the BRCA associated breast cancers. Triple positive accounted for 9.4%, followed by ER PR positive Her2 negative (34.4%) and ER PR negative Her2 positive (0%). Disease staging of all patients with breast cancer is done according to AJCC staging manual. Patients with BRCA pathogenic mutations diagnosed with stage II 60% followed by stage III 26.6% and stage IV14%. Patients with no pathogenic mutations in the BRCA genes also had IDC as being the most common histopathologcal type IDC 58% but also exhibited other type of histopathology such as ductal carcinoma in situ (DCIS) (10%), invasive lobular carcinoma (ILC) (6%), lobular carcinoma in situ (LCI). BRCA negative breast cancers exhibited 2% nuclear grade 3/3 in 36% of cases and high proliferative rate in 31%. Triple negative breast cancers accounted for 17%, triple positive 13%, ER PR positive Her2 negative 44% and ER PR negative Her 2 positive 13%. In terms of disease stage, those with no pathogenic mutations in the BRCA genes mostly had stage I 39% followed by stage II 61%, stag III 29%, and no cases were diagnosed with stage IV. Conclusion: These results suggest that breast cancers associated with BRCA mutations are more likely to be basal sub-type and exhibits more aggressive behavior, particularly in younger age groups and those patients present with a more advanced stage of disease than those with no pathogenic mutations in the BRCA genes who exhibit a less aggressive disease. We will continue to build our database for better characterization of our hereditary breast cancer cases at a clinical and molecular levels and use this information for future development of targeted anti-cancer agents use.

Keywords: Breast cancer; Hereditary breast cancer; BRCA genes; Triple negative; Hormonal receptors; Her2neu stage

Citation: Bujassoum, S. M., Bugrein, H. A., & Al-Sulaiman, R. (2017). Genotype and Phenotype Correlation of Breast Cancer in BRCA Mutation Carriers and Non-carriers. *Journal of Cancer Science & Therapy, 9, 358-362.*

Generation of synthetic CT using multi-scale and dual-contrast patches for brain MRI-only external beam radiotherapy

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Abstract

Purpose: To create a synthetic CT (sCT) from conventional brain MRI using a patch-based method for MRI-only radiotherapy planning and verification. METHODS: Conventional T1 and T2-weighted MRI and CT datasets from 13 patients who underwent brain radiotherapy were included in a retrospective study whereas 6 patients were tested prospectively. A new contribution to the Non-local Means Patch-Based Method (NMPBM) framework was done with the use of novel multi-scale and dual-contrast patches. Furthermore, the training dataset was improved by pre-selecting the closest database patients to the target patient for computation time/accuracy balance. sCT and derived DRRs were assessed visually and quantitatively. VMAT planning was performed on CT and sCT for hypothetical PTVs in homogeneous and heterogeneous regions. Dosimetric analysis was done by comparing Dose Volume Histogram (DVH) parameters of PTVs and organs at risk (OARs). Positional accuracy of MRI-only image-guided radiation therapy based on CBCT or kV images was evaluated. RESULTS: The retrospective (respectively prospective) evaluation of the proposed Multi-scale and Dual-contrast Patch-Based Method (MDPBM) gave a mean absolute error MAE=99.69±11.07HU (98.95±8.35HU), and a Dice in bones DIbone=83±0.03 (0.82±0.03). Good agreement with conventional planning techniques was obtained; the highest percentage of DVH metric deviations was 0.43% (0.53%) for PTVs and 0.59% (0.75%) for OARs. The accuracy of sCT/CBCT or DRRsCT/kV images registration parameters was <2mm and <2°. Improvements with MDPBM, compared to NMPBM, were significant. CONCLUSION: We presented a novel method for sCT generation from T1 and T2-weighted MRI potentially suitable for MRI-only external beam radiotherapy in brain sites.

Keywords: Brain; MRI-only radiotherapy; Patch method; Synthetic CT

Citation: Aouadi, S., Vasic, A., Paloor, S., Torfeh, T., McGarry, M., Petric, P., Riyas, M., Hammoud, R., Al-Hammadi, N. (2017). Generation of synthetic CT using multi-scale and dual-contrast patches for brain MRI-only external beam radiotherapy. *Physica Medica, 42*, 174-184.

Phase I study of a chloroquine-gemcitabine combination in patients with metastatic or unresectable pancreatic cancer

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Purpose: Following a previously published pre-clinical validation, this phase I study evaluated the safety, maximum tolerated dose, anti-tumour activity and immune status of a gemcitabine-chloroquine combination as a first- or late-line treatment in patients with metastatic or unresectable pancreatic cancer. METHODS: In this 3 + 3 dose escalation study, patients received a single weekly standard dose of intravenous gemcitabine, followed by single weekly oral intake of 100, 200 or 300 mg of chloroquine. Tumour response was assessed using the Response Evaluation Criteria in Solid Tumors version 1.1. Immune status was evaluated by RT-PCR to measure the relative expression of immune-related genes in peripheral blood mononuclear cells (PBMCs).
Results: Overall, nine patients [median age 72 years; interquartile range (IQR), 68-78 years] were treated. No dose-limiting toxicities as defined in the protocol were observed. Three patients experienced partial response, and two patients had stable disease. The median time to progression was 4 months (95% CI 0.8-7.2), and the median overall survival was 7.6 months (95% CI 5.3-9.9). Among 86 assayed immune genes, three were significantly differentially expressed in PBMCs from responding versus non-responding patients: interferon-gamma receptor-1, toll-like receptor 2, and beta-2 microglobulin. CONCLUSIONS: The addition of chloroquine to gemcitabine was well tolerated and showed promising effects on the clinical response to the anti-cancer chemotherapy. Based on these initial results, the efficacy of the gemcitabine-chloroquine combination should be further assessed.

Keywords: Beta-2 microglobulin; Chloroquine; Gemcitabine; Interferon-gamma receptor-1; Pancreatic cancer; Toll-like receptor 2

Citation: Samaras, P., Tusup, M., Nguyen-Kim, T. D. L., Seifert, B., Bachmann, H., von Moos, R., Knuth, A., Pascolo, S. (2017). Phase I study of a chloroquine–gemcitabine combination in patients with metastatic or unresectable pancreatic cancer. *Cancer Chemotherapy and Pharmacology, 80*(5), 1005-1012.

Acute Bacterial Meningitis in Qatar: A Hospital-Based Study from 2009 to 2013

Authors: Khan FY[1], Abu-Khattab M[2], Almaslamani EA[3], Hassan AA[2], Mohamed SF[4], Elbuzdi AA[5], Elmaki NY[2], Anand D[6], Sanjay D[6]

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Abstract

Background and Objectives: Bacterial meningitis is a common medical condition in Qatar. The aim of this study was to describe the clinical characteristics of bacterial meningitis, the frequency of each pathogen, and its sensitivity to antibiotics and risk factors for death.
Patients and Methods: This retrospective study was conducted at Hamad General Hospital between January 1, 2009, and December 31, 2013. RESULTS: We identified 117 episodes of acute bacterial meningitis in 110 patients. Their mean age was 26.4 ± 22.3 years (range: 2-74) and 81 (69.2%) of them were male patients. Fifty-nine episodes (50.4%) were community-acquired infection and fever was the most frequent symptom (94%), whereas neurosurgery is the most common underlying condition. Coagulase-negative staphylococci were the most common causative agent, of which 95% were oxacillin-resistant, while 63.3% of Acinetobacter spp. showed resistance to meropenem. The in-hospital mortality was 14 (12%). Only the presence of underlying diseases, hypotension, and inappropriate treatment were found to be independent predictors of mortality.
Conclusion: Acute bacterial meningitis predominantly affected adults and coagulase-negative staphylococci species were the common causative agent in Qatar with majority of infections occurring nosocomially. More than 90% of all implicated coagulase-negative staphylococci strains were oxacillin-resistant.

Citation: Khan, F. Y., Abu-Khattab, M., Almaslamani, E. A., Hassan, A. A., Mohamed, S. F., Elbuzdi, A. A., Elmaki, NY., Anand, D., Sanjay, D. (2017). Acute Bacterial Meningitis in Qatar: A Hospital-Based Study from 2009 to 2013. *BioMed Research International*, 2017, 1-8.

The emergence of multidrug-resistant Pseudomonas aeruginosa in cystic fibrosis patients on inhaled antibiotics

Authors: AbdulWahab A[1], Zahraldin K[2], Sid Ahmed MA[3], Jarir SA[4], Muneer M[5], Mohamed SF[4], Hamid JM[6], Hassan AAI[4], Ibrahim EB[7]

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Abstract

Introduction: Multidrug-resistant Pseudomonas aeruginosa (MDR-PA) is an important and growing issue in the care of patients with cystic fibrosis (CF), and a major cause of morbidity and mortality. OBJECTIVE: The objective of the study was to describe the frequency of MDR-PA recovered from the lower respiratory samples of pediatric and adult CF patients, and its antibiotic resistance pattern to commonly used antimicrobial agents including ß-lactams, aminoglycosides, and fluoroquinolones.

Materials and Methods: The lower respiratory isolates of P. aeruginosa were obtained from inpatients and outpatients CF clinics from a tertiary care teaching hospital for the period from October 2014 to September 2015. The identification and antimicrobial susceptibility for all the isolates were performed by using the BD Phoenix™ and E-test in compliance with Clinical and Laboratory Standards Institute (CLSI) guidelines. RESULTS: A total of 61 P. aeruginosa samples were isolated from thirty CF patients from twenty families. Twelve sputum samples were positive for MDR-PA (seven nonmucoid and five mucoid isolates) from five CF patients (five families) with moderate-to-very severe lung disease given MDR-PA frequency of 19.7%. The median age of the study group was 20 (range 10-30) years. Three CF patients were on chronic inhaled tobramycin and two on nebulized colistin. The antimicrobial patterns of isolates MDR-PA showed the highest rate of resistance toward each gentamycin, amikacin, and cefepime (100%), followed by 91.7% to ciprofloxacin, 75% to tobramycin, 58.3% to meropenem, and 50% to piperacillin-tazobactam. None of the isolates were resistant to colistin during the study period. CONCLUSION: The study results emphasize that the emergence of a significant problem in the clinical isolates of P. aeruginosa in CF patients that dictate appropriate attention to the antibiotic management after proper surveillance.

Keywords: Cystic fibrosis, inhaled antibiotics, multidrug-resistant Pseudomonas aeruginosa

Citation: AbdulWahab, A., Zahraldin, K., Ahmed, M. A. S., Jarir, S. A., Muneer, M., Mohamed, S. F., Hamid, J. M., Hassan, A. A., Ibrahim, E. B. (2017). The emergence of multidrug-resistant Pseudomonas aeruginosa in cystic fibrosis patients on inhaled antibiotics. *Lung India: Official Organ of Indian Chest Society, 34(6),* 527.

Targeting of X-linked inhibitor of apoptosis protein and PI3-kinase/AKT signaling by embelin suppresses growth of leukemic cells

Authors: Prabhu KS[1], Siveen KS[1], Kuttikrishnan S[1], Iskandarani A[1], Tsakou M[1], Achkar IW[1], Therachiyil L[1], Krishnankutty R[1], Parray A[1], Kulinski M[1], Merhi M[2], Dermime S[2], Mohammad RM[1], Uddin S[1]

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Abstract

The X-linked inhibitor of apoptosis (XIAP) is a viable molecular target for anticancer drugs that overcome apoptosis-resistance of malignant cells. XIAP is an inhibitor of apoptosis, mediating through its association with BIR3 domain of caspase 9. Embelin, a quinone derivative isolated from the Embelia ribes plant, has been shown to exhibit chemopreventive, anti-inflammatory, and apoptotic activities via inhibiting XIAP activity. In this study, we found that embelin causes a dose-dependent suppression of proliferation in leukemic cell lines K562 and U937. Embelin mediated inhibition of proliferation correlates with induction of apoptosis. Furthermore, embelin treatment causes loss of mitochondrial membrane potential and release of cytochrome c, resulting in subsequent activation of caspase-3 followed by polyadenosin-5'-diphosphate-ribose polymerase (PARP) cleavage. In addition, embelin treatment of leukemic cells results in a decrease of constitutive phosphorylations/activation level of AKT and downregulation of XIAP. Gene silencing of XIAP and AKT expression showed a link between XIAP expression and activated AKT in leukemic cells. Interestingly, targeting of XIAP and PI3-kinase/AKT signaling augmented inhibition of proliferation and induction of apoptosis in leukemic cells. Altogether these findings raise the possibility that embelin alone or in combination with inhibitors of PI3-kinase/AKT pathway may have therapeutic usage in leukemia and possibly other malignancies with up-regulated XIAP pathway.

Citation: Prabhu, K. S., Siveen, K. S., Kuttikrishnan, S., Iskandarani, A., Tsakou, M., Achkar, I. W., Therachiyil, L., Krishnankutty, R., Parray, A., Kulinski, M., Merhi, M., Dermime, S., Mohammad, R. M., Uddin, S. (2017). Targeting of X-linked inhibitor of apoptosis protein and PI3-kinase/AKT signaling by embelin suppresses growth of leukemic cells. PloS One, 12(7), e0180895.

Smac mimetics and type II interferon synergistically induce necroptosis in various cancer cell lines

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Abstract

Since cancer cells often evade apoptosis, induction of necroptosis as another mode of programmed cell death is considered a promising therapeutic alternative. Here, we identify a novel synergistic interaction of Smac mimetics that antagonize x-linked Inhibitor of Apoptosis (XIAP), cellular Inhibitor of Apoptosis (cIAP) 1 and 2 with interferon (IFN)Ð to induce necroptosis in apoptosis-resistant cancer cells in which caspase activation is blocked. This synergism is confirmed by calculation of combination indices (CIs) and found in both solid and hematological cancer cell lines as well as for different Smac mimetics (i.e. BV6, Birinapant), pointing to a broader relevance. Importantly, individual genetic knockdown of key components of necroptosis signaling, i.e. receptor-interacting protein (RIP) 1, RIP3 or mixed lineage kinase domain-like pseudokinase (MLKL), significantly protects from BV6/IFNÐ-induced cell death. Similarly, pharmacological inhibitors of RIP1 (necrostatin-1(Nec-1)), RIP3 (GSK'872) or MLKL (necrosulfonamide (NSA)) significantly reduce BV6/IFNÐ-stimulated cell death. Of note, IFN-regulatory factor (IRF)1 is required for BV6/IFNÐ-mediated necroptosis, as IRF1 silencing provides protection from cell death. By comparison, antibodies blocking tumor necrosis fator (TNF)Ð, TNF-related apoptosis-inducing ligand (TRAIL) or CD95 ligand fail to inhibit BV6/IFNÐ-induced cell death, pointing to a mechanism independently of death receptor ligands. This is the first report showing that Smac mimetics synergize with IFNÐ to trigger necroptosis in apoptosis-resistant cancer cells with important implications for Smac mimetic-based strategies for the treatment of cancer.

Keywords: Cancer; Cell death; Interferon; Necroptosis; Smac

Citation: Cekay, M. J., Roesler, S., Frank, T., Knuth, A. K., Eckhardt, I., & Fulda, S. (2017). Smac mimetics and type II interferon synergistically induce necroptosis in various cancer cell lines. *Cancer Letters, 410*, 228-237.

Clinical Outcomes of Implementing Evidence-Based Practice on Venous Thromboembolism Prevention for Cancer Patients in Qatar, a Retrospective Study

Authors: Elazzazy S[1], Abd El Wahab R[1], Negm R[2], A/Wahid M[1], Al Yafei S[1], Zaidan M[1], Al Hijji I[2]

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Abstract

Purpose: Venous thrombo embolism (VTE) disease is a serious condition; approximately 20% of all VTE cases occur in patients with cancer and it is a significant cause of morbidity and mortality in cancer patients. Plus, it is a significant predictor of increased mortality during the first year after diagnosis among all types and stages of cancer. Furthermore, VTE affects up to 20% of patients with cancer before death and has been reported in up to half of patients at the time of postmortem examination. Most hospitalized patients with cancer require thromboprophylaxis throughout hospitalization. This study was performed in the National Centre for Cancer Care and Research (NCCCR); the only tertiary care cancer center in Qatar. NCCCR is 1 out of 8 teaching hospitals in Hamad Medical Corporation (HMC) the main and largest healthcare organization in Qatar. An evidence based protocol for of VTE risk assessment and VTE prophylaxis was initiated in June 2011, piloted till December 2011, and then fully implemented in January 2012 to all cancer patients admitted to inpatients wards. This study focuses on the assessment of the clinical outcome in preventing VTE amongst cancer population in Qatar after implementation of evidence based thromboprophylaxis guidelines. Primary outcome: To measure the incidence rate of DVT before and after implementation of thromboprophylaxis protocol. Secondary outcome: Measuring physician compliance rate with the guidelines. Methods: A retrospective study was conducted to evaluate the incidence of DVT by evaluating Doppler ultrasound (US) database for 364 cases of inpatients and outpatients over 24 month (from January 2011 through December 2012) study period, all findings were retrospectively analyzed by a hematologist to identify patients who developed deep vein thrombosis (DVT) due to any current or previous admission (within 30 days before the Doppler US). The relationship between the incedence of devloping VTE over time and the complinece to VTE prevention protocol were established by correlation and regression analysis. Statistical analyses are done using excel and statistical packages SPSS 20.0. Findings: The study showed that the overall compliance to VTE prophylaxis protocol introduced to inpatients population (n=2595) increased from 61.5% to 84.6% with (p=0.0297), the incidence of DVT decreased by 66.4% (P=0.0145), which was correlated with a significant increase in the percentage of patients who received adequate VTE thromboprophylaxis. A percentage of 78% of patients developed DVT during admission in 2011 did not receive prophylaxis, compared to 29% in 2012. While this could be seen as a positive impact of thrombophylaxis, the number of patients who developed DVT despite receiving appropriate prophylaxis, increased from 22% in 2011 to 71% in 2012.

Implications: Appropriate thrombophylaxis could considerably improve the incidence of DVT in cancer patients. The majority of VTE in cancer patients occurred due to inappropriate prophylaxis, however the minority was due to prophylaxis failure, which raised the importance of implementing evidence based practice for thromboprophylaxis among hospitalized cancer patients.

Citation: Elazzazy S, Abd El Wahab R , Negm R, A/Wahid M, Al Yafei S, Zaidan M, Al Hijji I. (2017). Clinical Outcomes of Implementing Evidence-Based Practice on Venous Thromboembolism Prevention for Cancer Patients in Qatar, a Retrospective. *RRJPPS*; 6 (1) .16-23. E-ISSN: 2320-1215

Preliminary Study of Patients' Perceptions and Satisfaction in Outpatient Pharmacies at the Cancer and Heart Centres in Qatar

Authors: Ghasoub R[1], Zaidan M[2], Al-Yafie S[3], Al-Siyabi K[4], Radwan Y[2], Mohamed Ibrahim MI[5]

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Abstract

Background: Patient satisfaction is a worldwide goal of health care organizations and is considered as an indicator for the quality of healthcare services provided in any health care sector. Purpose: To assess patients' perceptions and satisfaction in the outpatient pharmacies at the National Centre for Cancer Care and Research (NCCCR) and the Heart Hospital (HH) at Hamad Medical Corporation (HMC) in Qatar.

Methods: A cross-sectional, descriptive study was conducted at the HH and the NCCCR from February to March 2013 using validated and piloted questionnaire. The self-administered questionnaire consisted of 5 sections: patients socio-demographic characteristics, five perception statements regarding pharmacy layout and waiting area, six statements regarding patients interaction with pharmacists, four perception questions concerning pharmacists' skills and two statements regarding the overall satisfaction. All statements were assessed with 5 points Likert scale. The survey was distributed to patients visited HH and NCCCR during the study period. Data was analysed descriptively using SPSS version 18. Results: A total of 198 participants completed the survey. Assessment of patients` satisfaction with the general pharmacy layout revealed that 93% of respondents were satisfied with pharmacy physical layout and 99% with dispensing area. With regard to patient's perception about interaction with pharmacists, the majority of respondents expressed high satisfaction with pharmacists' professionalism (99%), time spent consulting them (98%) and pharmacists` wellness to answer their inquires (99%). Top rated pharmacists' skill by patients was pharmacists' explanation to treatment (97%). Finally, the overall satisfaction was 98% with the service provided in pharmacy and 99% with the pharmacy staff.

Conclusion: The preliminary study showed a high level of patients` satisfaction with the pharmacy layout, as well as with the pharmacy staff.

Citation: Ghasoub R, Zaidan M, Al-Yafie S, Al-Siyabi K, Radwan Y, et al. (2017) Preliminary Study of Patients' Perceptions and Satisfaction in Outpatient Pharmacies at the Cancer and Heart Centres in Qatar. *Journal of Applied Pharmacy* 9:254. doi: 10.21065/1920-4159.1000254.

Epstein–Barr virus and its association with Fascin expression in colorectal cancers in the Syrian population: A tissue microarray study

Authors: Noor Al-Antary[1], Hanan Farghaly[2], Tahar Aboulkassim[3], Amber Yasmeen[3], Nizar Akil [4,5], and Ala-Eddin Al Moustafa [1,5,6]

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Abstract

Colorectal cancer (CRC) is the third most common malignancy in both men and women worldwide. Colorectal carcinogenesis is a complex, multistep process involving environmental and lifestyle features as well as sequential genetic changes in addition to bacterial and viral infections. Viral infection has a proven role in the incidence of approximately 20% of human cancers including gastric malignancies. Accordingly, Epstein–Barr virus (EBV) has been recently shown to be present in human gastric cancers, which could play an important role in the initiation and progression of these cancers. Therefore, this work explores the prevalence of EBV in 102 CRC tissues from the Syrian population using polymerase chain reaction (PCR) and tissue microarray (TMA) analysis. We found that EBV is present in 37 (36.27%) of CRC samples.

Additionally, the expression of LMP1 onco-protein of EBV was found to be correlated with Fascin expression/overexpression in the majority of CRC tissue samples, which are intermediate/high grade invasive carcinomas. Our data indicate that EBV is present in CRC and its presence is associated with more aggressive cancer phenotype. Consequently, future investigations are needed to expose the role of EBV in CRC initiation and progression.

Keywords: Cancer phenotype; colorectal cancers; EBV; Fascin; Syrian population

Citation: Noor Al-Antary, Hanan Farghaly, Tahar Aboulkassim, Amber Yasmeen, Nizar Akil & Ala-Eddin Al Moustafa (2017) Epstein–Barr virus and its association with Fascin expression in colorectal cancers in the Syrian population: A tissue microarray study, *Human Vaccines and Immunotherapeutics*, 13:7, 1573-1578

Glandular Morphometrics for Objective Grading of Colorectal Adenocarcinoma Histology Images.

Authors: Awan R[1,2], Sirinukunwattana K[2], Epstein D[3], Jefferyes S[2], Qidwai U[1], Aftab Z[4], Mujeeb I[4], Snead D[5], Rajpoot N[6,7].

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Abstract

Determining the grade of colon cancer from tissue slides is a routine part of the pathological analysis. In the case of colorectal adenocarcinoma (CRA), grading is partly determined by morphology and degree of formation of glandular structures. Achieving consistency between pathologists is difficult due to the subjective nature of grading assessment. An objective grading using computer algorithm will be more consistent, and will be able to analyse images in more detail. In this paper, we measure the shape of glands with a novel metric that we call the Best Alignment Metric (BAM). We show a strong correlation between a novel measure of glandular shape and grade of the tumour. We used shape specific parameters to perform a two-class classification of images into normal or cancerous tissue and a three-class classification into normal, low grade cancer, and high grade cancer. The task of detecting gland boundaries, which is a prerequisite of shape-based analysis, was carried out using a deep convolutional neural network designed for segmentation of glandular structures. A support vector machine (SVM) classifier was trained using shape features derived from BAM. Through cross-validation, we achieved an accuracy of 97% for the two-class and 91% for three-class classification.

Citation: Awan R[1,2], Sirinukunwattana K[2], Epstein D[3], Jefferyes S[2], Qidwai U[1], Aftab Z[4], Mujeeb I[4], Snead D[5], Rajpoot N[6,7] (2017) Glandular Morphometrics for Objective Grading of Colorectal Adenocarcinoma Histology Images, *Scientific Reports* 4;7(1):16852

Prostate cancer small non-coding RNA transcriptome in Arabs.

Authors: Shan J[1], Al-Rumaihi K[2], Chouchane K[3], Al-Bozom I[4], Rabah D[5], Farhat K[5], Chouchane L[6].

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Abstract

Background: Prostate cancer (PCa) is a complex disorder resulting from the combined effects of multiple environmental and genetic factors. Small non-coding RNAs (sRNAs), particularly microRNAs (miRNAs), regulate several cellular processes and have an important role in many human malignancies including PCa. We assessed the sRNA profiles associated with PCa in Arabs, a population that has rarely been studied.
Methods: We used next generation sequencing technology to obtain the entire sRNA transcriptome of primary prostate tumor formalin-fixed paraffin-embedded tissues, and their paired non-tumor tissues, collected from Bedouin patients (Qatari and Saudi). The miRNA and the target gene expression were evaluated by real-time quantitative PCR. miRNA KEGG pathway and miRNA target genes were subsequently analyzed by starBase and TargetScan software.
Results: Different expression patterns of several sRNA and miRNA editing were revealed between PCa tumor and their paired non-tumor tissues. Our study identified four miRNAs that are strongly associated with prostate cancer, which have not been reported previously. Differentially expressed miRNAs significantly affect various biological pathways, such as cell cycle, endocytosis, adherence junction and pathways involved in cancer. Prediction of potential targets for the identified miRNAs indicates the overexpression of KRAS, BCL2 and down-regulation of PTEN in PCa tumor tissues.
Conclusion: These miRNAs, newly associated with prostate cancer, may represent not only markers for the increased risk of PCa in Arabs, but may also reflect the clinical and pathological diversity as well as the ethno-specific heterogeneity of prostate cancer.

Keywords: Arabs, Prostate cancer, Small RNA transcriptome, miRNA, miRNA editing

Citation: Shan J1, Al-Rumaihi K2, Chouchane K3, Al-Bozom I4, Rabah D5, Farhat K5, Chouchane L6. (2017), Prostate cancer small non-coding RNA transcriptome in Arabs. *Journal of Translational Medicine.* 15(1):260

Frequency, characteristics and outcomes of appendicular neuroendocrine tumors: A cross-sectional study from an academic tertiary care hospital

Authors: Abdelrahman Abdelaal[1], Walid El Ansari[1], Issam Al-Bozom[2] , Mahwish Khawar[1] , Fakhar Shahid[1] , Ammar Aleter[1] , Mohammed Rasoul Abunuwar[1] , Ayman El-Menyar[1]

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Abstract

Background: Appendicular neuroendocrine tumors (NET, Carcinoid tumors) of the appendix are rare and mostly diagnosed incidentally on the post-operative histopathological examination. NET are usually associated with good 5-year survival rates. We aimed to assess our experience for the diagnosis and management of NET over 11 years. Method: It is a retrospective chart review of all clinically suspected patients with acute appendicitis who underwent emergent appendectomy with intention to treat between January 2004eDecember 2014, and were clinically followed up until 2016. Results: During the study period, a total of 13641 patients underwent emergency appendectomy, of which 32 were histologically confirmed NET. The mean age of the NET cases was 25.3 ± 7.9 years; 78% were males and all were clinically presented with acute appendicitis. The mean leucocyte was 15 ± 14 109 per Liter, and mean tumor size was 4.86 ± 3.18 (ranged 1.5e13) mm. The median length of hospital stay was 4 (2e15) days. One patient had right hemicolectomy; diagnosed with right colonic cancer with NET being an incidental finding as part of histopathological assessment. Another patient required a second stage procedure; he was diagnosed as goblet cell carcinoid with positive margin. None of the patients died 30-day postoperatively and all of them survived on clinical follow-up that ranged between 2 and 13 years.
Conclusion: Carcinoid tumors of the appendix are rare and typically diagnosed incidentally. Detailed examination of routine appendectomy specimens is the key for diagnosis. Simple appendectomy suffices for tumors.

Keywords: Carcinoid, Appendectomy, Appendix, Neuroendocrine tumor

Citation: Abdelrahman Abdelaal[1], Walid El Ansari[1], Issam Al-Bozom[2] , Mahwish Khawar[1] , Fakhar Shahid[1] , Ammar Aleter[1] , Mohammed Rasoul Abunuwar[1] , Ayman El-Menyar[1] (2017) Frequency, characteristics and outcomes of appendicular neuroendocrine tumors: A cross-sectional study from an academic tertiary care hospital**,** *Annals of Medicine and Surgery,* 21: 20-24

Prostate carcinoma with amphicrine features: further refining the spectrum of neuroendocrine differentiation in tumours of primary prostatic origin?

Authors: Prendeville S[1], Al-Bozom I[2], Compérat E[3,4], Sweet J[1], Evans AJ[1], Ben-Gashir M[2], Mete O[1], van der Kwast TH[1], Downes MR[5].

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Abstract:

Aims: The current World Health Organization classification categorises high-grade neuroendocrine (NE) carcinomas of the prostate into small-cell and large-cell types. A distinct form of carcinoma showing synchronous dual exocrine and NE differentiation, termed amphicrine carcinoma, has been described at various other sites, primarily within the gastrointestinal tract. The aim of this study was to investigate the clinicopathological features of a series of metastatic prostate carcinoma (PCa) cases with amphicrine features.

Methods And Results: Five cases of high-grade PCa showing an amphicrine immunohistochemical phenotype were prospectively collected. The serum prostate-specific antigen (PSA) level at diagnosis ranged from 38 ng/ml to 992 ng/ml (median 200 ng/ml). All five patients had metastatic disease, four at initial presentation. Microscopically, the tumours showed a solid/nested growth pattern composed of cells with amphophilic cytoplasm, vesicular nuclei, and macronucleoli. Morphological features of small-cell or large-cell NE carcinoma were absent. As compared with conventional high-grade PCa, the tumour cells showed a higher level of nuclear pleomorphism, brisk mitotic activity, and a high Ki67 proliferation index (median 50%). All cases showed immunohistochemical positivity for PSA, androgen receptor, and prostate-specific acid phosphatase, combined with diffuse or confluent/non-focal positivity for chromogranin-A and synaptophysin. Two hormone-naive cases showed a clinical response to androgen deprivation therapy.

CONCLUSION: This series highlights a previously undefined, clinically aggressive variant of PCa showing dual exocrine and NE differentiation, for which we are proposing the term PCa with amphicrine features. Increased recognition of these tumours may lead to a better understanding of their biology, and ultimately improve their clinical management.

Keywords: Amphicrine; Neuroendocrine; Prostate neoplasms

Citation: Prendeville S[1], Al-Bozom I[2], Compérat E[3,4], Sweet J[1], Evans AJ[1], Ben-Gashir M[2], Mete O[1], van der Kwast TH[1], Downes MR[5] (2017), Prostate carcinoma with amphicrine features: further refining the spectrum of neuroendocrine differentiation in tumours of primary prostatic origin? *Histopathology*.71(6):926-933

Case Reports/ Series

Renal Transplant Failure Due to Infiltrating Kaposi Sarcoma.

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Abstract

Kaposi sarcoma is one of the most common malignancies seen during the post transplant period, and it usually manifests in its cutaneous form. Renal transplant involvement is rare, whereas renal transplant parenchymal involvement causing transplant dysfunction is exceptionally rare. We report a case of visceral Kaposi sarcoma that led to renal transplant failure due to neoplastic infiltration of the renal allograft.

Key words: Kidney transplant, Malignancy, Renal transplant failure

Citation: Nauman A, Arshad A, Mujeeb I, Asim M (2017), Renal Transplant Failure Due to Infiltrating Kaposi Sarcoma. *Exp Clin Transplant*.

Glomus Tumor of the Scrotum: A Case Report and Mini-Review

Authors: Kareim Khalafalla[1] Abdulla Al-Ansaria Abdelfftah Omran[1] , Hanan Farghaly[2], Abdulqadir Alobaidy[1]

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Abstract

Glomus tumor in the genital area is extremely rare, with an extensive search in the medical literature revealing only 1 case arising in the scrotum. They can be easily mistaken, both clinically and radiologically, for skin neoplasms or primary testicular tumors involving the scrotum. This report presents a case of a 54-year-old man who presented with a painful right scrotal swelling. Ultrasound suggested the possibility of an epidermal inclusion cyst. The excised mass was diagnosed as a benign glomus tumor. To the best of our knowledge, this is the second case of glomus tumor of the scrotum described in the literature. This report expands the differential diagnoses of scrotal neoplasms. Furthermore, essential guidelines necessary to distinguish glomus tumor from other lesions in the scrotum are discussed.

Keyword: Glomus Tumor, Scrotum

Citation: Kareim Khalafalla[1] Abdulla Al-Ansaria Abdelfftah Omran[1] , Hanan Farghaly[2], Abdulqadir Alobaidy[1] (2017), Glomus Tumor of the Scrotum: *A Case Report and Mini-Review*,

Ameloblastic fibro-odontoma of the maxilla: a case report

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Abstract

The ameloblastic fibro-odontoma is a rare benign odontogenic lesion defined as a tumor with the general features of ameloblastic fibroma but that also contains enamel and dentin. In this article the authors describe a case of a young male patient with ameloblastic fibro-odontoma of the maxilla and the management of such condition.

Keywords: ameloblastic fibro-odontoma, ameloblastic, fibromaodontogenic tumor

Citation: Alani B, Aldoori M, Adham A, Ismail F. (2017) Ameloblastic fibro-odontoma of the maxilla: a case report. The *Egyptian Journal of Otolaryngology*, 33:694-7

Primary Pituitary Tuberculosis Revisited

Authors: Fatma Ben Abid[1] , Mohammed Abukhattab[1], Hanfa Karim[1], Mohamed Agab[1], Issam Al-Bozom[2] , and Wanis H. Ibrahim[3]

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Abstract

Patient: Female, 45 Final Diagnosis: Primary pituitary tuberculosis Symptoms: Headache, vomiting , Clinical Procedure: Pituitary biospy Specialty: Endocrinology and Metabolic Objective: Rare disease Background: Primary pituitary tuberculosis (in absence of other organ involvement and constitutional symptoms) is an extremely rare disease with total reported cases in the literature fewer than a hundred. Misdiagnosis as pituitary adenoma is common and late diagnosis can result in a permanent endocrine dysfunction and/or long-term neurologic sequelae. Case Report: We report on the case of a middle-aged woman who presented with severe headache and left third cranial nerve palsy. Magnetic resonance imaging (MRI) revealed a large pituitary tumor invading the left cavernous sinus. The case was initially misdiagnosed as pituitary adenoma. A pituitary biopsy was performed and was suggestive of pituitary tuberculosis. Extensive radiologic investigations did not reveal any evidence of other organ involvement by tuberculosis. She was successfully treated with anti-tuberculous medications. Conclusions: In areas with a high pre-test probability of tuberculosis, pituitary tuberculosis should be included in the differential diagnosis of pituitary tumors in order to avoid unnecessary surgical interventions. Besides being the first histologically-proven primary pituitary tuberculosis case reported from Qatar, the current case is unique in that extensive radiologic investigations did not reveal any evidence of other systemic or pulmonary tuberculosis.

Keywords: Pituitary Neoplasms , Tuberculosis, Central Nervous System, Tuberculosis, Endocrine

Citation: Fatma Ben Abid[1] , Mohammed Abukhattab[1], Hanfa Karim[1], Mohamed Agab[1], Issam Al-Bozom[2] , and Wanis H. Ibrahim[3] (2017), Primary Pituitary Tuberculosis Revisited, *American Journal of Case Reports*.18: 391–394.

Diffuse Large B-Cell Breast Lymphoma: A Case Series

Authors: Al Battah AH[1], Al Kuwari EA[2], Hascsi Z[3], Nashwan AJ[4], Elomari H[5], Elsabah H[5], Al Azawi S[5], Kohla S[6], Soliman D[6,7], Yassin MA[5]

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Abstract

Primary breast lymphoma (PBL) is a rare disease, and few clinicohistopathologic features of the disease have been discussed in previous studies. It represents 2.2% of extranodal lymphomas and constitutes 0.04% to 0.5% of malignant breast neoplasms, despite the clinical and radiographic similarities between breast lymphoma and carcinoma, the prognosis, as reported in the literature, varies. No consensus exists on the best way to treat PBL. However, radiotherapy and chemotherapy were used alone or in combination to treat various cases of PBL. We retrospectively studied 3 cases of PBL of the breast seen in patients attending a tertiary cancer center in Qatar, between 2012 and 2015, in an attempt to determine the common clinical features, therapy, and prognosis of PBL.

Keywords: Breast lymphoma; diffuse large B-cell lymphoma (DLBCL); primary breast lymphoma (PBL)

Citation: Al Battah, A.H., Al Kuwari, E.A., Hascsi, Z., Nashwan, A.J., Elomari, H., Elsabah, H., Al Azawi, S., Kohla, S., Soliman, D. and Yassin, M.A. (2017). Diffuse Large B-Cell Breast Lymphoma: A Case Series. *Clinical Medicine Insights: Blood Disorders, 10*, 1-7.

Bone marrow biopsy findings in a case of rare infantile malignant osteopetrosis presented with bicytopenia and leukoerythroblastic picture

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Abstract

Osteopetrosis, is a congenital genetic disease characterized by increased bone density due to impaired bone resorption by osteoclasts. It is a rare severe fatal disorder with an average incidence of 1:200,000–1:300,000. It causes bone marrow failure and could be certainly diagnosed based on the characteristic radiological findings. Leukoerythroblastic picture associated with anisopoikylocytosis and features of extramedullary hematopoiesis and cytopenias are almost consistently reported in all diagnosed cases and should be considered as significant features pointing to this rare diagnosis. Osteopetrosis is classified into three forms: Infantile malignant autosomal recessive osteopetrosis, intermediate osteopetrosis and autosomal dominant (AD) osteopetrosis.

We are reporting here the interesting bone marrow biopsy findings of a full term baby with positive first degree consanguinity, admitted to NICU at the age of 35 days with fever and sepsis.

Peripheral smear showed leucoerythroblastic picture, frequent tear-drop cells and some circulating blasts (9%). Based on peripheral smear findings, bone marrow pathology including leukaemic process, metastasis or infiltrative bone marrow disease were considered in differential diagnosis.

Bone marrow trephine biopsy revealed pronounced narrowing of bone marrow spaces with marked hypocellularity, absent megakaryocytes, markedly suppressed erythropoiesis and granulopoiesis. There is abnormal bone formation with thickened multiple disorganized bone trabeculae with areas of patchy reticulin fibrosis and several interrupted pieces of ossified cartilage.

Citation: Soliman, D. S. A. (2017). Bone marrow biopsy findings in a case of rare infantile malignant osteopetrosis presented with bicytopenia and leukoerythroblastic picture. Human Pathology: *Case Reports, 10*, 10-11.

De Novo Precursor B-Lymphoblastic Leukemia/Lymphoma with Double-Hit Gene Rearrangements (MYC/BCL-2) Presented With Spinal Cord Compression and Acquired Factor XIII Deficiency

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Abstract

Double-hit lymphomas (DHLs) are aggressive mature B-cell neoplasms associated with rearrangements involving MYC and B-cell lymphoma-2 (BCL-2). Such DH events are extremely rare in B-cell precursor acute lymphoblastic leukemia (B-ALL), especially in young adults. A 29-year-old male patient initially presented to emergency department with right mandibular mass of 2 months duration associated with intermittent fever. Laboratory workup revealed very high lactate dehydrogenase at 2,026.0 U/L. Peripheral blood revealed pancytopenia with many circulating blasts (about 77%). Bone marrow (BM) aspirate revealed infiltration with many small sized blasts of very high nucleocytoplasmic ratio, finely dispersed nuclear chromatin and prominent nucleoli. The BM biopsy reflected marked hypercellularity with diffuse replacement by sheets of blasts, positive for TdT, PAX-5, CD10, cMYC, BCL-2 and CD20 with Ki-67 > 90%. Flow cytometry on BM revealed a precursor B-immunophenotype (CD45 (dim), CD19, CD10, Tdt and CD20). The blasts are negative for cytoplasmic and surface IgM. Cytogenetics revealed complex karyotype: 46,XY,del(6)(q21q23),t(8;22)(q24.1;q11.2),t(14;18)(q32;q21)(20). A diagnosis of B-lymphoblastic leukemia/lymphoma with t(8;22)(q24.1;q11.2) and t(14;18)(q32;q21) was made. Fluorescent in situ hybridization (FISH) analysis revealed an abnormal hybridization signal pattern for CDKN2A probe, indicating biallelic (homozygous) deletion of the short arm of chromosome 9 (9p) in 94% of the cells analyzed. The patient had severe life-threatening bleeding despite of normal prothrombin time (PT) and activated partial thromboplastin time (APTT) due to acquired factor XIII deficiency, an overlooked rare coagulopathy disorder. In addition, the patient developed acute sudden onset paraplegia, and magnetic resonance imaging (MRI) of spine showed acute cord compression which necessitated emergency radiotherapy after which chemotherapy was started on hyper-CVAD (hyperfractionated cyclophosphamide, vincristine, adriamycin, and dexamethasone) protocol. MRI showed dramatic resolution of the mass. Very few cases of B-ALL with DH rearrangement with true precursor B-cell phenotype (positivity for TdT with negativity for surface light chain) have been reported. Many of these had frequent central nervous system (CNS) involvement, with complex karyotypes, highly aggressive course, with short survival of less than 1 year. This case however showed very good response to treatment. In contrary to DHL, de novo B-ALL with double-hit rearrangements is more prevalent in pediatrics and young adults. Although most of reported cases represent transformation of follicular lymphoma, our patient's young age, acute onset and absent lymphadenopathies all support de novo ALL.

Citation: Soliman, D. S., Al-Sabbagh, A., Ibrahim, F., Fareed, S., Talaat, M., & Yassin, M. A. (2017). De Novo Precursor B-Lymphoblastic Leukemia/Lymphoma With Double-Hit Gene Rearrangements (MYC/BCL-2) Presented With Spinal Cord Compression and Acquired Factor XIII Deficiency. *Journal of Hematology*, 6(2-3), 62-67.

Herpes Zoster Infection in Patient with Chronic Myeloid Leukemia on Imatinib

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Abstract

Varicella-zoster virus is a member of the Herpes viridae family. It can cause chickenpox and Herpes zoster infection (shingles). The latter is an acute, cutaneous infection caused by reactivation of a primary varicella infection upon decline in the virus-specific and cell-mediated immunity. Herpes zoster Infection is a serious infection in immune compromised patients. Predisposing factors include long steroid use, immunosuppressive medications, HIV, solid and hematological malignancies, hematopoietic stem cell transplant, exposure to radiotherapy, infections, &other forms of stress. Here we report one case of Herpes zoster infection in patient with Chronic Myeloid Leukemia, chronic phase, after four years of Imatinib mesylate, in which complete cytogenetic and molecular remission achieved. This is an exceptional rare complication of Imatinib in Chronic Myeloid Leukemia patients without stem cell transplantation.

Citation: Elkourashy, S. A., & Yassin, M. A. (2017) Herpes Zoster Infection in Patient with Chronic Myeloid Leukemia on Imatinib. *Haematology International Journal, 1*(1), 1-

Spinal cord compression secondary to extramedullary hematopoiesis: A rareness in a young adult with thalassemia major

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Abstract

We report a case of a thalassemia major male patient with back pain associated to severe weakness in lower extremities resulting in the ability to ambulate only with assistance. An urgent magnetic resonance imaging (MRI) of thoracic and lumbosacral spine was requested. A posterior intraspinal extradural mass lesion compressing the spinal cord at the level of thoracic T5-8 was present, suggesting an extramedullary hematopoietic centre, compressing the spinal cord. He was treated successfully with thalassemia major alone. The patient was treated with blood transfusion, dexamethasone, morphine and paracetamol, followed by radiotherapy in 10 fractions to the spine (daily fraction of 2Gy from T3 to T9, total dose 20 Gy). His pain and neurologic examination quickly improved. A new MRI of the spine, one week after radiotherapy, showed an improvement of the extramedullary hematopoietic mass compression. In conclusion, EMH should be considered in every patient with ineffective erythropoiesis and spinal cord symptoms. MRI is the most effective method of demonstrating EMH. The rapid recognition and treatment can dramatically alleviate symptoms. There is still considerable controversy regarding indications, benefits, and risks of each of modality of treatment due to the infrequency of this disorder.

Keywords: extramedullary hematopoiesis, spinal cord compression, thalassemia major, radiotherapy

Citation: Fareed, S., Soliman, A. T., De Sanctis, V., Kohla, S., Soliman, D., Khirfan, D., Tambuerello, A., Talaat, M., Nashwan, A., Caparrotti, P., Yassin, M. A. (2017). Spinal cord compression secondary to extramedullary hematopoiesis: A rareness in a young adult with thalassemia major. Acta Bio Medica Atenei Parmensis, 88(2), 237-242.

High grade B-cell neoplasm with surface light chain restriction & TdT co-expression evolved in a case of MYC- rearranged Diffuse Large B-cell Lymphoma. A dilemma in classification

Authors: Soliman D[1,3], Al-Sabbagh A[1], Ibrahim F[1], Taha R[2], Nawaz Z[1], Elkourashy S[2], Haider A[1], Akiki S[1], Yassin M[2]

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Abstract

According to World Health Organization (WHO) classification (2008), B-cell neoplasms are classified into precursor B-cell or a mature B-cell phenotype and this classification was also kept in the latest WHO revision (2016). We are reporting a male patient in his fifties, with tonsillar swelling diagnosed as diffuse large B-cell lymphoma (DLBCL), germinal center. He received 6 cycles of RCHOP and showed complete metabolic response. Two months later, he presented with severe CNS symptoms. Flow cytometry on bone marrow (BM) showed infiltration by CD10-positive Kappa-restricted B-cells with loss of CD20 and CD19, and downregulation of CD79b. Moreover, the malignant population showed Tdt expression. BM Cytogenetics revealed t(8;14)(q24;q32) within a complex karyotype. Retrospectively, MYC and Tdt immunostains performed on original diagnostic tissue and came negative for Tdt and positive for MYC. It has been rarely reported that mature B-cell neoplasms present with features of immaturity; however the significance of Tdt acquisition during disease course was not addressed before. What is unique in this case is that the emerging disease has acquired an immaturity marker while retaining some features of the original mature clone. No definitive WHO category would adopt high-grade neoplasms that exhibit significant overlapping features between mature and immature phenotypes.

Citation: Soliman, D. S., Al-Sabbagh, A., Ibrahim, F., Taha, R. Y., Nawaz, Z., Elkourashy, S., Haider., A, Akiki., S, Yassin, M. (2017). High-Grade B-Cell Neoplasm with Surface Light Chain Restriction and Tdt Coexpression Evolved in a MYC-Rearranged Diffuse Large B-Cell Lymphoma: A Dilemma in Classification. *Case Reports in Hematology*, v2017, 1-9.

Rare Oral Mucosal Manifestations of Hydroxyurea Therapy in Chronic Myeloid Leukemia

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Abstract

Chronic myeloid leukemia (CML), is myeloproliferative neoplasm, that accounts for 15-20% of all leukemia's in adults, resulting from reciprocal translocation between the long arms of chromosomes 9 and 22(Philadelphia chromosome), producing BCR-ABL oncogene fusion, which is currently targeted by tyrosine kinase inhibiters (TKIs), but still Hydroxyurea (HU) used in chronic myeloid leukemia, its role as cytoreduction and as bridging therapy before starting tyrosine kinase inhibitors (TKI). There are several recognized side effects of hydroxyurea, such as cutaneous abnormalities and here we report rare mucous manifestations of hydroxyurea.

Keywords: Rare oral mucosal, chronic myeloid leukemia, Hydroxyurea

Citation: Mudawi, D., Nashwan, AJ., Gameel, A., Shehab, F., Abdulla, M., Yassin, M. A. (2017) Rare Oral Mucosal Manifestations of Hydroxyurea Therapy in Chronic Myeloid Leukemia. *Haematology International Journal, 1*(1), 1-2.

Spinal Abscess Caused by Salmonella Bacteremia in a Patient with Primary Myelofibrosis

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Abstract

BACKGROUND: In Primary Myelofibrosis (PMF; a clonal disorder arising from the neoplastic transformation of early hematopoietic stem cells) patients, spinal cord compression (SCC) is a common complication or even a presentation symptom due to extramedullary hematopoiesis (EMH). However, a case of SCC caused by a spinal abscess is unusual. To the best of our knowledge, this is the first case report of this rare condition. CASE REPORT: We are reporting the case of a 50-year-old male with primary myelofibrosis and long-standing splenomegaly with back pain as a presenting symptom who was found to have spinal cord compression. An MRI was performed, as EMH was suspected. The blood cultures revealed an infection with Salmonella, so the patient was placed on ceftriaxone, with no response. The patient demonstrated substantial clinical improvement after 2 weeks of neurosurgical intervention and pain management. CONCLUSIONS: In PMF patients, back pain with fever or mild neurological symptoms needs to be investigated urgently because of the high risk of irreversible spinal cord damage leading to partial or complete loss of functional independence and shortened survival. The compression could be related to EMH or infections due to an immunodeficiency.

Keywords: Epidural Abscess; Primary Myelofibrosis; Salmonella Infections; Spinal Cord Compression

Citation: Fareed, S., Nashwan, A. J., Jarir, S. A., Husain, A., Suliman, D. S., Ibrahim, F., Moustafa, A., Akhter, M. S., Yassin, M. A. (2017). Spinal Abscess Caused by Salmonella Bacteremia in a Patient with Primary Myelofibrosis. *The American Journal of Case Reports, 18*, 859-864.

Nilotinib Induced Recurrent Gastric Polyps: Case Report and Review of Literature

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Abstract

BACKGROUND: Tyrosine kinase inhibitors (TKIs) are currently an important targeted drug class in the treatment of chronic myeloid leukemia (CML). Imatinib was the first approved TKI for CML in 2001. Nilotinib is a second-generation TKI, approved in 2007; it inhibits BCR-ABL, PDGFR, and c-KIT, and is 30 times more potent than imatinib. Tyrosine kinase enzymes are expressed in multiple tissues and are involved in several signaling pathways; they have been shown to have several off-target side effects. CASE REPORT: We report a case of an elderly male with CML and no history of gastrointestinal diseases, treated with nilotinib, and developed recurrent gastric polyps after three years of treatment. We excluded common causes of gastric polyps and therefore considered nilotinib as a probable cause of recurrent gastric polyps. CONCLUSIONS: Recurrent gastric polyps could be a potential side effect of nilotinib treatment. Careful long-term monitoring of patients on TKI therapy is necessary and further long-term studies of TKI side effects are needed.

Keywords: Adenomatous Polyps; BCR-ABL Positive; Chronic Myelogenous Leukemia; Drug-Related Side Effects and Adverse Reactions; Imatinib; Nilotinib; Tyrosine Kinase Inhibitors (TKI)

Citation: Kassem, N., Ismail, O. M., Elomri, H., & Yassin, M. A. (2017). Nilotinib Induced Recurrent Gastric Polyps: Case Report and Review of Literature. *The American Journal of Case Reports, 18*, 794-798.

A Young Adult with Unintended Acute Intravenous Iron Intoxication Treated with Oral Chelation: The Use of Liver Ferriscan for Diagnosing and Monitoring Tissue Iron Load

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Abstract

Acute iron intoxication (FeI) in humans has not been adequately studied. The manifestation of FeI, defined as a serum iron concentration >300 µg/dL (55 µmol/L) within 12 hours of ingestion, include various symptoms appearing in progressive stages. Systemic toxicity is expected with an intake of 60 mg/kg. A 27-year-old female nurse presented with unintended acute intravenous iron intoxication (FeI) a week after self-injecting herself with 20 ampoules of IV iron (4,000 mg elemental iron, 60 mg/kg). She had stable vital signs and mild hepatic tenderness. Hepatic MRI (Ferriscan®) showed a moderate/severe liver iron content (LIC: 9 mg/g dry tissue). Her hemogram, electrolytes, hepatic and renal functions were normal. Based on the high dose of iron received and her elevated LIC, chelation therapy was advised. She accepted only oral therapy and was started on deferasirox at a dose of 30 mg/kg daily. This oral chelation proved to be effective in clearing her hepatic iron overload after six months (LIC: 2 mg/g dry tissue), without side effects. This case also proved the value of Ferriscan® in diagnosing the degree of hepatic FeI and monitoring therapy to achieve a safe level of LIC.

Keywords: Ferriscan; Iron; acute iron intoxication; deferasirox; liver iron content (LIC); oral iron chelation

Citation: Yassin, M., Soliman, A. T., De Sanctis, V., Moustafa, A., Samaan, S. A., & Nashwan, A. (2017). A young adult with unintended acute intravenous iron intoxication treated with oral chelation: the use of liver ferriscan for diagnosing and monitoring tissue iron load. *Mediterranean Journal of Hematology and Infectious Diseases, 9*(1), 1-6.

Reviews/Book Chapters

Cost-effectiveness research in cancer therapy: a systematic review of literature trends, methods and the influence of funding

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Abstract

OBJECTIVE: To perform a first-time analysis of the cost-effectiveness (CE) literature on chemotherapies, of all types, in cancer, in terms of trends and change over time, including the influence of industry funding. DESIGN: Systematic review. SETTING: A wide range of cancer-related research settings within healthcare, including health systems, hospitals and medical centres. PARTICIPANTS: All literature comparative CE research of drug-based cancer therapies in the period 1986 to 2015. PRIMARY AND SECONDARY OUTCOME MEASURES: Primary outcomes are the literature trends in relation to journal subject category, authorship, research design, data sources, funds and consultation involvement. An additional outcome measure is the association between industry funding and study outcomes. ANALYSIS: Descriptive statistics and the Ð2, Fisher exact or Somer's D tests were used to perform non-parametric statistics, with a p value of <0.05 as the statistical significance measure. RESULTS: Total 574 publications were analysed. The drug-related CE literature expands over time, with increased publishing in the healthcare sciences and services journal subject category (p<0.001). The retrospective data collection in studies increased over time (p<0.001). The usage of prospective data, however, has been decreasing (p<0.001) in relation to randomised clinical trials (RCTs), but is unchanging for non-RCT studies. The industry-sponsored CE studies have especially been increasing (p<0.001), in contrast to those sponsored by other sources. While paid consultation involvement grew throughout the years, the declaration of funding for this is relatively limited. Importantly, there is evidence that industry funding is associated with favourable result to the sponsor (p<0.001). CONCLUSIONS: This analysis demonstrates clear trends in how the CE cancer research is presented to the practicing community, including in relation to journals, study designs, authorship and consultation, together with increased financial sponsorship by pharmaceutical industries, which may be more influencing study outcomes than other funding sources.

Keywords: Cancer; Cost-effectiveness; Therapy; Trends

Citation: Al-Badriyeh, D., Alameri, M., & Al-Okka, R. (2017). Cost-effectiveness research in cancer therapy: a systematic review of literature trends, methods and the influence of funding. *BMJ Open, 7*(1), 1-11.

Development of Nursing Research in Qatar: 15-Year Status Report

Authors: Nashwan A[1,2], Mansour D[3], Alzayyat A[4], Nair S[1], Zawahreh A[1]

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Abstract

Purpose: The aim was to provide an overview of nursing research in Qatar over the previous 15 years. Methods: Several online databases were searched for published articles between 2000 and 2015 related to nursing research in Qatar. Findings: The initial search identified 6540 articles, whose titles, abstracts, and texts were screened for satisfying the eligibility criteria. Only 57 articles met the eligibility criteria. The highest percentage of studies (42%) focused on clinical practice issues. Eighty-seven percent (87%) were published in peer-reviewed journals; 84% (N = 48) were conducted between 2011 and 2015 with 16-fold growth rate compared to 2000-2005. The majority of authors were postgraduate qualified nurses, mainly 67% of them with hospital and academic affiliation (88%). The vast majority of identified studies were conducted in hospital settings (63%), and only 14% of the studies used a nursing theory or conceptual framework. Sixty-three percent (63%) of the studies were quantitative, and 25% were funded mostly by hospitals. The majority of the included studies have been done in collaboration with other disciplines (60%), especially with physicians (65%). Conclusion: Nursing research in Qatar has dramatically developed and improved over the last 15 years. However, nurses need to be more motivated to conduct and publish research in collaboration with national, regional, and international research bodies. Implications for Nursing & Health Policy: Building and sustaining nursing research infrastructure considered as a top priority for nursing leaders, academic, and ministry of public health in Qatar. Furthermore, preparing nurses with higher academic degrees is an essential step in advancing research utilization in Qatar and the region.

Keywords: Literature Review, Nursing, Research, Nurses, Qatar

Citation: Nashwan, A. J., Mansour, D. B., Alzayyat, A., Nair, S. K., & Zawahreh, A. I. (2017). Development of Nursing Research in Qatar: 15-Year Status Report. *Open Journal of Nursing, 7*(02), 242

ß-Thalassemia Distribution in the Old World: an Ancient Disease Seen from a Historical Standpoint

Authors: De Sanctis V[1], Kattamis C[2], Canatan D[3], Soliman AT[4], Elsedfy H[5], Karimi M[6], Daar S[7], Wali Y[8], Yassin M[9], Soliman N[10], Sobti P[11], Al Jaouni S[12], El Kholy M[5], Fiscina B[13], Angastiniotis M[14]

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Abstract

Background: Haemoglobinopathies constitute the commonest recessive monogenic disorders worldwide, and the treatment of affected individuals presents a substantial global disease burden. ß-thalassaemia is characterised by the reduced synthesis (ß+) or absence (ßo) of the ß-globin chains in the HbA molecule, resulting in accumulation of excess unbound ß-globin chains that precipitate in erythroid precursors in the bone marrow and in the mature erythrocytes, leading to ineffective erythropoiesis and peripheral haemolysis. Approximately 1.5% of the global population are heterozygotes (carriers) of the ß-thalassemias; there is a high incidence in populations from the Mediterranean basin, throughout the Middle East, the Indian subcontinent, Southeast Asia, and Melanesia to the Pacific Islands. AIM: The principal aim of this paper is to review, from a historical standpoint, our knowledge about an ancient disease, the ß-thalassemias, and in particular, when, how and in what way ß-thalassemia spread worldwide to reach such high incidences in certain populations. RESULTS: Mutations involving the ß-globin gene are the most common cause of genetic disorders in humans. To date, more than 350 ß-thalassaemia mutations have been reported. Considering the current distribution of ß- thalassemia, the wide diversity of mutations and the small number of specific mutations in individual populations, it seems unlikely that ß-thalassemia originated in a single place and time. **Conclusions**: Various processes are known to determine the frequency of genetic disease in human populations. However, it is almost impossible to decide to what extent each process is responsible for the presence of a particular genetic disease. The wide spectrum of ß-thalassemia mutations could well be explained by looking at their geographical distribution, the history of malaria, wars, invasions, mass migrations, consanguinity, and settlements. An analysis of the distribution of the molecular spectrum of haemoglobinopathies allows for the development and improvement of diagnostic tests and management of these disorders.

Keywords: Ancient disease; Old World; Thalassemia distribution

Citation: De Sanctis, V., Kattamis, C., Canatan, D., Soliman, A. T., Elsedfy, H., Karimi, M., Daar, S., Wali, Y., Yassin, M., Soliman, N., Sobti, P., Al Jaouni, S., El Kholy, M., Fiscina, B., Angastiniotis, M. (2017). ß thalassemia distribution in the old world: an ancient disease seen from a historical standpoint. *Mediterranean Journal of Hematology and Infectious Diseases, 9(1),*

Safety of selective internal radiation therapy (SIRT) with yttrium-90 microspheres combined with systemic anticancer agents: expert consensus

Authors: Kennedy A[1], Brown DB[2], Feilchenfeldt J[3], Marshall J[4], Wasan H[5], Fakih M[6], Gibbs P[7], Knuth A[3], Sangro B[8], Soulen MC[9], Pittari G[3], Sharma RA[10]

[1]Radiation Oncology Research, Sarah Cannon Research Institute, Nashville, Tennessee, USA.[2]Department of Radiology and Radiologic Sciences, Vanderbilt University Medical Center, Nashville, Tennessee, USA.[3]National Center for Cancer Care and Research, HMC, Doha, Qatar.[4]Hematology and Oncology Lombardi Comprehensive Cancer Center, Georgetown University Medical Center, Washington DC, USA.[5]Imperial College, Division of Cancer, Hammersmith Hospital, London, UK.[6]Department of Medical Oncology & Therapeutics Research, City of Hope, Duarte, California, USA.[7]Western Hospital, Footscray, Victoria, Australia.[8]Liver Unit, Clinica Universidad de Navarra, IDISNA, CIBEREHD, Pamplona, Navarra, Spain.[9]Abramson Cancer Center, University of Pennsylvania, Philadelphia, Pennsylvania, USA.[10]NIHR University College London Hospitals Biomedical Research Centre, UCL Cancer Institute, University College London, London, UK.

Abstract

Selective internal radiation therapy (SIRT) with microspheres labelled with the ß-emitter yttrium-90 (Y-90) enables targeted delivery of radiation to hepatic tumors. SIRT is primarily used to treat inoperable primary or metastatic liver tumors. Eligible patients have usually been exposed to a variety of systemic anticancer therapies, including cytotoxic agents, targeted biologics, immunotherapy and peptide receptor radionuclide therapy (PRRT). All these treatments have potential interactions with SIRT; however, robust evidence on the safety of these potential combinations is lacking. This paper provides current clinical experiences and expert consensus guidelines for the use of SIRT in combination with the anticancer treatment agents likely to be encountered in clinical practice. It was agreed by the expert panel that precautions need to be taken with certain drugs, but that, in general, systemic therapies do not necessarily have to be stopped to perform SIRT. The authors recommend stopping vascular endothelial growth factor inhibitors 4-6 weeks before SIRT and restart after the patient has recovered from the procedure. It may also be prudent to stop potent radiosensitizers such as gemcitabine therapy 4 weeks before SIRT, and restart treatment at least 2Ð4 weeks later. Data from phase III studies combining SIRT with fluorouracil (5FU) or folinic acid/5FU/oxaliplatin (FOLFOX) suggest that hematological toxicity is more common from the combination than it is from chemotherapy without SIRT. There is no evidence to suggest that chemotherapy increases SIRT-specific gastro-intestinal or liver toxicities.

Keywords: Selective internal radiation therapy (SIRT); consensus; cytotoxins; liver neoplasms

Citation: Kennedy, A., Brown, D. B., Feilchenfeldt, J., Marshall, J., Wasan, H., Fakih, Gibbs, P., Knuth, A., Sangro, B., Soulen, MC., Pittari, G., Sharma, RA. (2017). Safety of selective internal radiation therapy (SIRT) with yttrium-90 microspheres combined with systemic anticancer agents: expert consensus. Journal of Gastrointestinal Oncology, 8(6), 1079.

Restoring Natural Killer Cell Immunity against Multiple Myeloma in the Era of New Drugs

Authors: Pittari G[1], Vago L[2,3], Festuccia M[4,5], Bonini C[6,7], Mudawi D[1], Giaccone L[4,5], Bruno B[4,5]

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Abstract

Transformed plasma cells in multiple myeloma (MM) are susceptible to natural killer (NK) cell-mediated killing via engagement of tumor ligands for NK activating receptors or "missing-self" recognition. Similar to other cancers, MM targets may elude NK cell immunosurveillance by reprogramming tumor microenvironment and editing cell surface antigen repertoire. Along disease continuum, these effects collectively result in a progressive decline of NK cell immunity, a phenomenon increasingly recognized as a critical determinant of MM progression. In recent years, unprecedented efforts in drug development and experimental research have brought about emergence of novel therapeutic interventions with the potential to override MM-induced NK cell immunosuppression. These NK-cell enhancing treatment strategies may be identified in two major groups: (1) immunomodulatory biologics and small molecules, namely, immune checkpoint inhibitors, therapeutic antibodies, lenalidomide, and indoleamine 2,3-dioxygenase inhibitors and (2) NK cell therapy, namely, adoptive transfer of unmanipulated and chimeric antigen receptor-engineered NK cells. Here, we summarize the mechanisms responsible for NK cell functional suppression in the context of cancer and, specifically, myeloma. Subsequently, contemporary strategies potentially able to reverse NK dysfunction in MM are discussed.

Keywords: IDO inhibitors; chimeric antigen receptor; cytokines; daratumumab; elotuzumab; immune checkpoint inhibition; immunotherapy; killer immunoglobulin-like receptors; multiple myeloma; natural killer cells

Citation: Pittari, G., Vago, L., Festuccia, M., Bonini, C., Mudawi, D., Giaccone, L., & Bruno, B. (2017). Restoring natural killer cell immunity against multiple myeloma in the era of new drugs. *Frontiers in Immunology, 8*, 1444.

Scientific publications on hepatocellular carcinoma: a global survey of the literature with a special emphasis on China's contributions

Authors: Hou F[1], Han T[2], Sugawara Y[3], Bodzin AS[4], Cronin DC[5], Hong SK[6], Sandri GB[7], Rasul KI[8], Omar A[9], Bhattacharyya GS[10], Mohanty SR[11], Wang SD[12], Qi X[1], Written on behalf of AME Liver Disease Cooperative Group

[1]Department of Gastroenterology, [2]Department of Oncology, Cancer Center, General Hospital of Shenyang Military Area, China; [3]Department of Transplantation/Pediatric Surgery, Postgraduate School of Life Science, Kumamoto University, Chuo-ku, Japan; [4]Department of Surgery, Section of Abdominal Organ Transplantation, University of Chicago, Chicago, Illinois, USA; [5]TransplantationSurgery, Porter Adventist Hospital, Denver, CO, USA; [6]Department of Surgery, College of Medicine, Seoul National University, Korea; [7]Divisionof General Surgery and Liver Transplantation, S. Camillo Hospital, Lazio, Italy; [8]National Center for Cancer Care and Research, Doha, Qatar; [9]Endemic Medicine Department, Faculty of Medicine, Cairo University, Egypt; MedicalOncology, FORTIS Hospital, West Bengal, India; [11]Division of Gastroenterology& Hepatobiliary Disease; New York Presbyterian, Brooklyn Methodist Hospital, Affiliate Weill Cornell Medical College; Center for Liver Diseases,New York Presbyterian Brooklyn Methodist Hospital, Brooklyn, New York, USA; [12]AME Publishing Company, Hong Kong, China.

Abstract

Background: Hepatocellular carcinoma (HCC) is the most common primary malignancy of the liver associated with a high morbidity and mortality. Scientific publications may be the most helpful method to distribute information and improve our understanding of HCC. A literature review aimed to systematically analyze the global distribution of scientific publications regarding HCC was performed. Methods: The Web of Science database was searched to identify all papers regarding HCC from January, 1980 to December, 2016. The major categories included the publication years, regions, journals, research areas, organizations, and funding agencies. Results: A total of 103,197 papers regarding HCC were identified. The number of papers gradually increased over years and peaked in 2016. USA, China, and Japan ranked as the top three countries in number of publications. In 2016, China ranked first as the country with the greatest number of publications. According to the number of papers published in 2016 by organization, Fudan University ranked first. According to the total number of papers by funding agency, the National Natural Science Foundation of China ranked first. Additionally, the top three research areas according to the total number of papers were gastroenterology/hepatology, oncology, and surgery; and the top three journals according to the total number of papers were Hepatology, Journal of Hepatology, and Word Journal of Gastroenterology. Conclusions: Our literature survey describes the global distribution of manuscripts in the field of HCC. Notably, Chinese researchers are now the leading publisher of manuscripts in the field.

Keywords: Hepatocellular carcinoma (HCC); publication; research; China; systematic review

Citation: Hou, F., Han, T., Sugawara, Y., Bodzin, A. S., Cronin, D. C., Hong, S. K., Sandri, G. B., Rasul, K. I., Omar, A., Bhattacharyya, G. S., Mohanty, S. R., Wang, S. D., Qi, X. (2017). Scientific publications on hepatocellular carcinoma: a global survey of the literature with a special emphasis on China's contributions. AME Medical Journal, 2(7).

A Review of Clinical Outcomes Associated with Two Meropenem Dosing Strategies

Authors: Wilby KJ[1], Nasr ZG[2], Elazzazy S[3], Lau TT[4], Hamad A[3]

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Abstract

Meropenem is a carbapenem antibiotic that exhibits time-dependent bactericidal activity, traditionally dosed intravenously at 1 g every 8 h. In order to maximize its pharmacodynamic activity and reduce costs, an alternative regimen employed by many institutions is 500 mg every 6 h. The objective of this review was to summarize and evaluate published literature comparing clinical outcomes associated with these two meropenem dosing regimens. The literature was searched up to October 2016 using the MEDLINE, EMBASE, and Google Scholar databases. Three retrospective cohort studies were identified that compared clinical outcomes in general infectious disease patients (two studies) and patients with febrile neutropenia (one study). All studies reported no difference in clinical outcomes (clinical success, time to defervescence, sign or symptom resolution, length of stay, mortality, need for other antibiotics, and seizure rates). One study reported reduced economic costs with the alternative dosing. Interpretation of findings was primarily limited by small sample sizes and generalizability. Based on the data reviewed, the alternative dosing regimen of meropenem 500 mg intravenously every 6 h could be considered a therapeutic option. Future studies are needed to confirm the findings of this review, especially in high-risk populations such as immunocompromised patients or those with severe infections.

Keywords: Febrile Neutropenia; Meropenem; Carbapenem; Cefepime; Dose Strategy

Citation: Wilby, K. J., Nasr, Z. G., Elazzazy, S., Lau, T. T., & Hamad, A. (2017). A Review of Clinical Outcomes Associated with Two Meropenem Dosing Strategies. *Drugs in R&D*, 17(1), 73-78.

Vascular Endothelial Growth Factor (VEGF) Signaling in Tumour Vascularization: Potential and Challenges

Authors: Siveen KS[1], Prabhu K[1], Krishnankutty R[1], Kuttikrishnan S[1], Tsakou M[1], Alali FQ[2], Dermime S[3], Mohammad RM[1], Uddin S[1]

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Abstract

Angiogenesis is defined as the physiological process by which new blood vessels develop from pre-existing vessels; either by sprouting or intussusception. Inhibition of angiogenesis is one of the most encouraging strategies to manage the growth and metastasis of cancers. The functional and proliferative status of blood vessels is regulated by the balance between various key molecules that either stimulate or inhibit angiogenesis. During quiescence, the "angiogenic switch" is "off". However, during tumour development pro-angiogenic factors such as vascular endothelial growth factor (VEGF), basic and acidic fibroblast growth factor, tumour necrosis factor-Ð and interleukin-1 are pathologically enhanced. Persistent growth of tumour directed capillary networks creates a favourable microenvironment, promoting cancer growth, progression and metastasis. VEGF, particularly VEGF-A, is a key angiogenic factor. Targeting VEGF, its receptors and the downstream signaling cascade, is a viable strategy to prevent tumour growth and metastasis. The present review discusses the role of VEGF in tumour angiogenesis and the current understanding of anti-VEGF therapies as well as refractoriness of anti-angiogenesis cancer therapy.

Keywords: VEGF; angiogenic balance; anti-VEGF therapy; extracellular matrix; food and drug administration; tumour angiogenesis

Citation: Sivaraman Siveen, K., Prabhu, K., Krishnankutty, R., Kuttikrishnan, S., Tsakou, M., Q Alali, F., Dermime, S., Mohammad, R. M., Uddin, S. (2017). Vascular endothelial growth factor (VEGF) signaling in tumour vascularization: potential and challenges. *Current Vascular Pharmacology*, 15(4), 339-351.

Potential therapeutic targets of Guggulsterone in cancer.

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Abstract

Natural compounds capable of inducing apoptosis in cancer cells have always been of considerable interest as potential anti-cancer agents. Many such compounds are under screening and development with their potential evolution as a clinical drug benefiting many of the cancer patients. Guggulsterone (GS), a phytosterol isolated gum resin of the tree Commiphora mukul has been widely used in Indian traditional medicine as a remedy for various diseses. GS has been shown to possess cancer chemopreventive and therapeutic potential as established by in vitro and in vivo studies. GS has been shown to target constitutively activated survival pathways such as PI3-kinase/AKT, JAK/STAT, and NFÐB signaling pathways that are involved in the regulation of growth and inflammatory responses via regulation of antiapoptotic and inflammatory genes. The current review focuses on the molecular targets of GS, cellular responses, and the animal model studies in various cancers. The mechanistic action of GS in different types of cancers also forms a part of this review. The perspective of translating this natural compound into a clinically approved drug with its pros and cons is also discussed.

Keywords: Cancers; Chemoprevention; Guggulsterone; Molecular targets; Natural compounds

Citation: Bhat, A. A., Prabhu, K. S., Kuttikrishnan, S., Krishnankutty, R., Babu, J., Mohammad, R. M., & Uddin, S. (2017). Potential therapeutic targets of Guggulsterone in cancer. *Nutrition and Metabolism*, 14(1), 23.

Anticancer potential of sanguinarine for various human malignancies

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Abstract

Sanguinarine (Sang) - a benzophenanthridine alkaloid extracted from Sanguinaria canadensis - exhibits antioxidant, anti-inflammatory, proapoptotic and growth inhibitory activities on tumor cells of various cancer types as established by in vivo and in vitro studies. Although the underlying mechanism of Sang antitumor activity is yet to be fully elucidated, Sang has displayed multiple biological effects, which remain to suggest its possible use in plant-derived treatments of human malignancies. This review covers the anticancer abilities of Sang including inhibition of aberrantly activated signal transduction pathways, induction of cell death and inhibition of cancer cell proliferation. It also highlights Sang-mediated inhibition of angiogenesis, inducing the expression of tumor suppressors, sensitization of cancer cells to standard chemotherapeutics to enhance their cytotoxic effects, while addressing the present need for further pharmacokinetic-based studies.

Keywords: Sanguinarine; cancer; molecular targets; natural compounds; proapoptotic

Citation: Achkar, I. W., Mraiche, F., Mohammad, R. M., Uddin, S. (2017). Anticancer potential of sanguinarine for various human malignancies. *Future Medicinal Chemistry*, 9(9), 933-950

Targeting acute myeloid leukemia stem cell signaling by natural products

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Abstract

Acute myeloid leukemia (AML) is the most commonly diagnosed leukemia in adults (25%) and comprises 15-20% in children. It is a genetically heterogeneous aggressive disease characterized by the accumulation of somatically acquired genetic changes, altering self-renewal, proliferation, and differentiation of hematopoietic progenitor cells, resulting in uncontrolled clonal proliferation of malignant progenitor myeloid cells in the bone marrow, peripheral blood, and occasionally in other body tissues. Treatment with modern chemotherapy regimen (cytarabine and daunorubicin) usually achieves high remission rates, still majority of patients are found to relapse, resulting in only 40-45% overall 5 year survival in young patients and less than 10% in the elderly AML patients. The leukemia stem cells (LSCs) are characterized by their unlimited self-renewal, repopulating potential and long residence in a quiescent state of G0/G1 phase. LSCs are considered to have a pivotal role in the relapse and refractory of AML. Therefore, new therapeutic strategies to target LSCs with limited toxicity towards the normal hematopoietic population is critical for the ultimate curing of AML. Ongoing research works with natural products like parthenolide (a natural plant extract derived compound) and its derivatives, that have the ability to target multiple pathways that regulate the self-renewal, growth and survival of LSCs point to ways for a possible complete remission in AML. In this review article, we will update and discuss various natural products that can target LSCs in AML.

Keywords: Acute myeloid leukemia; Leukemia stem cells; Natural products; Self-renewal

Citation: Siveen, K. S., Uddin, S., & Mohammad, R. M. (2017). Targeting acute myeloid leukemia stem cell signaling by natural products. *Molecular Cancer*, 16(1), 13.

Palliative care in interstitial lung disease: living well

Authors: Kreuter M[1], Bendstrup E[2], Russell AM[3], Bajwah S[4], Lindell K[5], Adir Y[6], Brown CE[7], Calligaro G[8], Cassidy N[9], Corte TJ[10], Geissler K[11], Hassan AA[12], Johannson KA[13], Kairalla R[14], Kolb M[15], Kondoh Y[16], Quadrelli S[17], Swigris J[18], Udwadia Z[19], Wells A[20], Wijsenbeek M[21]

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Abstract

Progressive fibrotic interstitial lung diseases (ILDs) are characterised by major reductions in quality of life and survival and have similarities to certain malignancies. However, palliative care expertise is conspicuously inaccessible to many patients with ILD. Unmet patient and caregiver needs include effective pharmacological and psychosocial interventions to improve quality of life throughout the disease course, sensitive advanced care planning, and timely patient-centred end-of-life care. The incorrect perception that palliative care is synonymous with end-of-life care, with no role earlier in the course of ILD, has created a culture of neglect. Interventions that aim to improve life expectancy are often prioritised without rigorous assessment of the individual's health and psychosocial needs, thereby inadvertently reducing quality of life. As in malignant disorders, radical interventions to slow disease progression and palliative measures to improve quality of life should both be prioritised. Efficient patient-centred models of palliative care must be validated, taking into account religious and cultural differences, as well as variability of resources. Effective implementation of palliative care for ILD will require multidisciplinary participation from clinicians, specialist nurses, psychologists, social workers, and, in some countries, non-governmental faith and community-based organisations with access to palliative care expertise.

Citation: Kreuter, M., Bendstrup, E., Russell, A. M., Bajwah, S., Lindell, K., Adir, Y., Brown, C. E., Calligaro, G., Cassidy, N., Corte, T. J., Geissler, K., Hassan, A. A., Johannson, K. A., Kairalla, R., Kolb, M., Kondoh, Y., Quadrelli, S., Swigris, J., Udwadia, Z., Wells, A., Wijsenbeek, M. (2017). Palliative care in interstitial lung disease: living well. *The Lancet Respiratory Medicine*. 5(12), 968-980

Conference Papers

Title	Meeting Title & Location	Speakers/ Presenters	Dates	Notes
A framework for education and advocacy for optimal cancer pain management in resource-limited settings	European Society for Medical Oncology (ESMO), Madrid, Spain	Bautista MJ, Ahmedzai SH, Bouzid K, Gibson R, Gumara Y, Hassan AA, Hattori S, Keefe D, Kraychete DC, Lee DH, Tamura K, Wang JJ	November, 2017	
A Hermeneutic Interpretation of Nurses' Experiences of Truth Telling and Harms in Cancer Care in Qatar	2nd GCC Nursing Conference. Doha, Qatar.	Wafa Awad Alsaadi, MSN, BSN, RN & Janet Rankin, PhD, RN	February, 2017	Poster
	International Conference on Communication in Healthcare (ICCH) & Health Literacy Annual Research Conference (HARC). USA	Dr. Carma Bylund Associate Director, Medical Education, Hamad Medical Corporation, Qatar, Associate Professor of Communication Studies, Weill Cornell Medical College in Qatar	October 10, 2017	Oral presentation
A patient with squamous cell carcinomas of the head and neck cancer responding to anti-PD-1 (Nivolumab) treatment showed differential expression of immunological markers	Annual Research Day at Hamad Medical Corporation – Grand Hyatt Hotel and Villa	Raza A	27 November 2017	Poster

Title	Meeting Title & Location	Speakers/ Presenters	Dates	Notes
Assessment of Deep Vein Thrombosis (DVT) Cases in Ambulatory Cancer Patients in Qatar. A retrospective Case Control Study	NCCN 22nd Annual Conference 2017, in Orlando, Florida, USA	Abd El Wahab R, Negm R, Al Tarawneh N, Elazzazy S	March 23 – 25, 2017	Poster.
Assessment of Deep Vein Thrombosis (DVT) Cases in Ambulatory Cancer Patients in Qatar. A retrospective Case Control Study	The MASCC/ ISOO Annual Meeting, Washington DC, USA. 2017	Abd El Wahab R, Negm R, Al Tarawneh N, Elazzazy S	June 22-24, 2017	Poster.
Assessment of Deep Vein Thrombosis (DVT) Cases in Ambulatory Cancer Patients in Qatar. A retrospective Case Control Study	14th national conference, AC Forum 2017, April 20 – 22 , Los Angeles, USA	Abd El Wahab R, Negm R, Al Tarawneh N, Elazzazy S	April 20 – 22, 2017	Poster.
Chronic Myeloid Leukemia with Cryptic Philadelphia Translocation Presenting Initially As Extramedullary Lymphoid Blast Phase	59th ASH Annual Meeting, USA	Soliman DS, Al Sabbagh A, Mudawi DS, Nawaz Z, Amer A, Alkuwari E, Yassin MA	9-12 December, 2017	

Title	Meeting Title & Location	Speakers/ Presenters	Dates	Notes
Circulating myeloma tumor cells characterization by next generation flow cytometry in a patient with scleromyxedema, a case-report.	COMY conference, Paris, France	Taha R	21-22 April 2017	
Clinical Characteristics and Outcomes of Patients with Neuroendocrine tumors of the female genital tract: A single-institution analysis (2010–2016) in Qatar	1st Qatar Gynecological Malignancy Symposium. Doha, Qatar.	Mohamed N, Al Malik H, Akram A, Ghazouani H, Omar NE	March, 2017	Poster
Clinicopathologic risk score correlation with Oncotype DX	4th Qatar Internal Medicine Conference, Doha, Qatar.	Salih F, Bujassoum S, Rasul K, Elmistiri M, Elhadi N, Gazouani H, Calaud F	October, 2017	Poster
Comprehensive decision analytic and cost-effectiveness modeling of posaconazole versus fluconazole as prophylactic systemic antifungals in patients with hematological malignancies in Qatar	2017 Midyear ASHP Meeting, Orange County Convention Center Florida, USA.	Al Marridi W, El-Hijji I, Nounou A, El Azzazy S, Al-Badriyeh D.	Dec 3-7, 2017	Poster.
Congenital Methemoglobinemia Under Diagnosed Condition with Variable Therapeutic Options	59th ASH Annual Meeting, USA	Yassin MA, Soliman DS	9-12 December, 2017	

Title	Meeting Title & Location	Speakers/ Presenters	Dates	Notes
Effect of Denosumab Versus Zoledronic Acid on Calcium Levels in Cancer Patients with Bone Metastasis. A Retrospective Cohort Study	6th World Pharmacists and Clinical Pharmacy Annual Congress, Chicago, USA	Nasser S, Sahal A, Hamad A, ElAzzazy S	May 22-23, 2017	Poster.
Effect of Denosumab Versus Zoledronic Acid on Calcium Levels in Cancer Patients with Bone Metastasis. A Retrospective Cohort Study	The 4th Pharmacy Conference, November, Doha, Qatar	Nasser S, Sahal A, Hamad A, ElAzzazy S	16- 20 November 2017	Poster.
Effect of Denosumab Versus Zoledronic Acid on Calcium Levels in Cancer Patients with Bone Metastasis. A Retrospective Cohort Study	European Pharma (9th Annual European Pharma Congress) Madrid, Spain, 2017	Nasser S, Sahal A, Hamad A, ElAzzazy S	26 - 28 Jun, 2017	Poster.
Effects of Exercise on Cancer Related Fatigue in Adults: A Literature Review and Meta-Analysis of Randomized Controlled Trials	4th Qatar Internal Medicine Conference, Doha, Qatar.	Vijayakumar S	October, 2017	Poster
Effects of Exercises on Cancer related Fatigue in Adults: a Systematic review and Meta-analysis of Randomized Controlled Trials	4th Qatar internal medicine conference and the best of ACP meeting 2017	Vijayakumar S	12-14 Oct 2017	Poster presentation

Title	Meeting Title & Location	Speakers/ Presenters	Dates	Notes
End of Life Care for Haematologic Malignancies: A Retrospective Cohort Study from the State of Qatar	The MASCC/ ISOO Annual Meeting, Washington DC, USA. 2017	Hassan A, Elazzazy S, Haddad P	June 22-24, 2017	Poster.
End of Life for Hematologic Malignancies: A retrospective cohort study from the state of Qatar	EAPC 2017 Madrid, Spain	Hassan A	May 18-20, 2017	Poster
Enhancing the Safety of Warfarin Use through Proper Governance in the National Center for Cancer Care & Research Outpatient Clinics	The 4th Pharmacy Conference, Doha, Qatar.	Hamad A, El-Azzazy S, Abdelwahid M, Adel A, Hussein R, Al-Khater A	16- 20 November, 2017	Poster.
Evaluation of cationic channel TRPV2 as a novel biomarker and therapeutic target in Leukemia-Implications concerning the resolution of pulmonary dysfunction	19th Euro Congress on Cancer Science and Therapy, Lisbon, Portugal.	Azizi F	July -17-19, 2017	Abstract published in J cancer Sci Ther 2017, 9:6(Suppl), DOI: 10.4172/1948-5956-C1-106.
Expanded virus-specific T-cells as a therapy to eradicate viral infections in patients with hematologic malignancies undergoing allogeneic hematopoietic stem cells transplantation	International symposia workshop – HMC Qatar: Ethical, technical & management challenges in Organ stem cell donation and transplantation, Hajar Auditorium, HMC	Merhi M	18 November 2017	Poster

Title	Meeting Title & Location	Speakers/ Presenters	Dates	Notes
Genotype and phenotype correlation of breast cancer in BRCA carriers and non-carriers	Annual Research Day, Doha, Qatar	Dr. Salha Bujassoum	November, 2017	Poster Presentation
Greenosporone C, a novel compound inhibits and causes apoptosis in leukemic cell lines.	Annual Research Day at Hamad Medical Corporation – Grand Hyatt Hotel and Villa	Prabhu K	27 November 2017	Poster
High grade B-cell neoplasm with surface light chain restriction & TdT co-expression evolved in a case of MYC- rearranged Diffuse Large B-cell Lymphoma. A dilemma in classification	European School of Hematology. Dublin, Ireland.	Soliman D, Al-Sabbagh A, Ibrahim F, Taha R, Akiki S, Nawaz Z, Elkourashy S, Yassin M	March, 2017	
Hypercalcemia in Association with Malignancy type and effect on Mortality	EAPC 2017 Madrid, Spain	Hassan A	May 18-20, 2017	Poster
Implementing Barcode Medication Administration (BCMA) in a Cancer Center in Qatar	HIMSS Qatar Educational Conference and Health IT Exhibition. Doha, Qatar.	Al Kuwari WD, Al Mashaer W, Tubishat E, Nashwan AJ, Elmeir H	December, 2017	Poster

Title	Meeting Title & Location	Speakers/ Presenters	Dates	Notes
Improving Patient Safety through Effective Utilization of Intravenous Chemotherapy Medications in the National Center of Cancer Care & Research	Qatar Patient Safety Week. Doha, Qatar.	Hamad A, Jose Ison E, Saleh A, Mahfouz Y, Al Tarawneh N	September, 2017	Poster
Knowledge, Attitude and Practice of Hospital Pharmacists towards Adverse Drug Reaction Reporting: a Cross-Sectional Study	3rd Qatar Patient Safety Week. Doha, Qatar.	Al Hail M, Elkassem W, A Pallivalappila , Hamad A Muqarrabeen S, ThomasB	September 2017	Poster
Knowledge, Attitude and Practice of Hospital Pharmacists towards Adverse Drug Reaction Reporting: a Cross-Sectional Study	ASHP Midyear Clinical Meeting. Orlando, USA	Al Hail M, Elkassem W, A Pallivalappila , Hamad A Muqarrabeen S, ThomasB	Dec 3-7, 2017	Poster.
Mortality in Dialysis Patients in Qatar: A Retrospective Epidemiologic Study	4th Qatar Internal Medicine Conference, Doha, Qatar.	Ghonimi T, Iqbal Z, Hamad A, Yasin F, Ali F, El-Sayed R, Maamoun H, Amin M, Khan S, Ezzat H, Elsanosi S, Alali F	October, 2017	Poster
Oncological Emergencies: Pharmacists Can Make a Difference	the 4th Qatar International Pharmacy Conference, November 16-20 November, 2017 Doha, Qatar.	Elazzazy S	17 Nov. 2017	Oral presentation.

Title	Meeting Title & Location	Speakers/ Presenters	Dates	Notes
Oncology Nurses' Experience with Cerner Clairvia™: A Case Study from Qatar	2nd GCC Nursing Conference. Doha, Qatar.	Al Kuwari W, Al Mashaer W, Tubishat E, Nashwan AJ, Elmeir H	February, 2017	Poster
Oncology Nurses' Perceptions and Educational Needs Regarding Genetics in Qatar: A Pilot Study	2nd GCC Nursing Conference, Doha, Qatar.	Nashwan AJ, Allahverdi N, Al-Dewik N, Yassin MA	February, 2017	Poster
Optimizing Donor Recruitment and Selection for Allogeneic Transplantation In Qatar: Challenges and Opportunities	22nd annual congress of Asia-Pacific Blood and Marrow Transplantation Group (APBMT). Tehran, Iran.	Fadul A, Gamil A, Al Azewi S, Pillai S, Jorgensen C, Al Hijji I, Bakr M, Liakopoulou E, Knuth A	28-30 Oct 2017	Poster
Outcomes of Patient Education Practices to Optimize the Safe use of Lithium: A literature Review	3rd Qatar Patient Safety Week. Doha, Qatar.	Zolezzi M, Eltorki YH, Almamoon M, Abdelwahab M, Omar NE	September 2017	Poster
Out-Patient Nurses Experience with POCT Technology in NCCCR	2nd GCC Nursing Conference. Doha, Qatar.	Hijazi H, Nashwan AJ, Hamad Y	February, 2017	Poster
Ovarian Sex Cord Stromal Cell Tumors: The Qatar Experience	4th Qatar Internal Medicine Conference. Doha, Qatar.	Madani A, Jacob C, Ghazouani H, Kanbour A, Omar N, Akram A, El Malik H	October, 2017	Poster
Ovarian Sex Cord Stromal Cell Tumors: The Qatar Experience	Qatar Gynecological Malignancy Symposium. Doha, Qatar	Madani A, Jacob C, Ghazouani H, Kanbour A, Omar N, Akram A, El Malik H	March, 2017	Poster

Title	Meeting Title & Location	Speakers/ Presenters	Dates	Notes
Patient Education: The Gate to Optimum Compliance & Outcomes	The 4th Qatar International Pharmacy Conference, November 16-20 November, 2017 Doha, Qatar.	Elazzazy S, et al	16 Nov. 2017	Oral/ workshop presentation.
Perceptions and Expectations of Health Care Providers towards the Clinical Pharmacy Services in Mental Health Hospital in Qatar	Qatar Patient Safety Week, Doha, Qatar.	Eltorki YH, Zolezzi M, Abdallah O, Omar NE	September, 2017	Poster
Perceptions and Expectations of Health Care Providers towards the Clinical Pharmacy Services in Mental Health Hospital in Qatar	4th Qatar International Pharmacy Conference, Doha, Qatar. Annual Research Day, Doha, Qatar.	Eltorki YH, Zolezzi M, Abdallah O, Omar NE	16-20 November, 2017 November 2017	Poster Poster
Pharmacoeconomics analysis of capecitabine versus 5-fluorouracil/ leucovorin as adjuvant therapy in stage III colon cancer in the state of Qatar	2017 Midyear ASHP Meeting, Orange County Convention Center Florida, USA.	Alkadour A, Feilchenfeldt J, Nounou A, El Azzazy S, Al-Badriyeh D.	Dec 3-7, 2017	Poster.

Title	Meeting Title & Location	Speakers/ Presenters	Dates	Notes
Pristimerin increases mitochondrial reactive oxygen species by inhibition of manganese dependent superoxide dismutase leading to apoptosis in human colorectal cancer cells	Annual Research Day 2017. Doha, Qatar	Siveen KS	27 November 2017	
Prostate Cancer in Elderly Men: Active Surveillance and Watchful Waiting	2nd Men's Health Symposium The Torch Hotel, Doha, Qatar	Hammerer PG	27th April, 2017	Oral Presentation
Prostate Cancer in Elderly Men: Place of Surgery, Radiotherapy in scope of discussion of focal therapy?	2nd Men's Health Symposium The Torch Hotel, Doha, Qatar	Hammerer PG	27th April, 2017	Oral Presentation
Pulmonary Hypertension Induced by Thalidomide (and Derivatives) in Patients with Multiple Myeloma	4th Qatar Internal Medicine Conference, Doha, Qatar.	Nashwan A, Al-Dewik N, Al Sabah H, Yassin M, Mohamed SF, Omar N, Mansour D	October, 2017	Poster
Qatar experience of hereditary breast cancer	12th Asia-Pacific Conference on Human Genetics (APCHG 2017), Bangkok, Thailand	Dr. Salha Bujassoum	November 08 – 10, 2017	Poster Presentation

Title	Meeting Title & Location	Speakers/ Presenters	Dates	Notes
Reducing overall healthcare costs by introducing a new dosage form of Trastuzumab (Herceptin®)	The 4th Pharmacy Conference, Doha, Qatar.	Elazzazy S, Hussein R, Bujassoum S, Babiker M, Hijazi H, Al Okka R, Al-Khater A, Hamad A	16- 20 November, 2017	Poster.
Re-invigorating Nurses' Experience with the Cerner Oncology Solution: One-Year Follow-up	2nd International Saudi Health Informatics Conference. Riyadh, Kingdom of Saudi of Arabia.	Al Kuwari W, Al Mashaer W, Tubishat E, Nashwan AJ, Elmeir H, Mahmoud M, Mohamed A, Llamas A	April, 2017	Poster
Sanguinarine induces apoptosis in lung cancer cells via inhibition of anti-apoptotic family proteins	Annual Research Day at Hamad Medical Corporation – Grand Hyatt Hotel and Villa	Kuttikrishnan S	27 November 2017	Poster
Second Generation Tyrosine Kinase Inhibitors As Upfront Therapy in the Era of Sleeve Gastrectomy Does It Work?	59th ASH Annual Meeting, USA	Yassin MA, Nashwan AJ, Kassem N	9-12 December, 2017	
Sexual rehabilitation after prostate Ca treatments	2nd Men's Health Symposium The Torch Hotel, Doha, Qatar	Al Zubaidi R	27th April, 2017	Oral Presentation
The role of the pharmacist in decreasing discharge medication discrepancies: A prospective observational study	6th World Pharmacists and Clinical Pharmacy Annual Congress, Chicago, USA	Abu Hassan T, Al Yafei S, Hussein R, Nasser S, Basha A, Ghazouani H, Elazzazy S	May 22-23, 2017	Poster.

Title	Meeting Title & Location	Speakers/ Presenters	Dates	Notes
The role of the pharmacist in decreasing discharge medication discrepancies: A prospective observational study	European Pharma (9th Annual European Pharma Congress) Madrid, Spain, 2017	Abu Hassan T, Al Yafei S, Hussein R, Nasser S, Basha A, Ghazouani H, Elazzazy S (S)	26 - 28 Jun, 2017	Poster.
Treatment with 5-Aza-2'-Deoxycytidine and X-irradiation induces the expression of NY-ESO-1 tumor antigen in lung cancer cells	Annual Research Day at Hamad Medical Corporation – Grand Hyatt Hotel and Villa	Inchakalody V	27 November 2017	Poster
Viral Specific T cells expanded for the treatment of viral infections post-allogeneic hematopoietic stem cell transplantation showed preferential phenotypic and functional markers after in vitro treatment with anti-PD-1 antibody	Annual Research Day at Hamad Medical Corporation – Grand Hyatt Hotel and Villa	Merhi M	27 November 2017	Oral presentation
Viral Specific T cells expanded for the treatment of viral infection post-allogeneic hematopoietic stem cell transplantation showed preferential phenotypic and functional markers after in vitro treatment with anti-PD-1 antibody	Annual Research Day at Hamad Medical Corporation – Grand Hyatt Hotel and Villa	Fernandez Q	27 November 2017	Poster

Title	Meeting Title & Location	Speakers/ Presenters	Dates	Notes
What is the Quality of Life of Advanced Gynecologic Malignancy Patients in National Center for Cancer Care and Research?	1st Qatar Gynecological Malignancy Symposium. Doha, Qatar.	Wafa Alsaadi; Ambareen Saleh; Hafedh Ghazouani; Dr. Hind Elmalik	March, 2017	Poster
Papillary tumor of the Pineal region: A diagnosis on cytological features	IAP-Arab division Oman	Dr. Sameera Rashid, Dr. Adnan Khan, Dr. Ali Ayyad, Dr. Issam Al Bozom	15-18 November 2017	Poster
Multiparametric MRT (mp-MRI) of the scrotum-A Helpful tool in differentiating sex-cord stromal tumors from non-stromal malignant testicular neoplasms	EPOS- Electronic Presentation Online System ESR – European Society of Radiology	A.M Abualruz, M. Mafraji, K. Al-Rumaihi, I. Al-Bozom, S. Yadav, M. Khanna	November 2017	Poster

Active Research Projects

MRC ID	Title	Investigators	Funding	Design	Status
17004	Investigation of Anti- Tumor T- Cells responses generated in vitro against Ny-Eso-1 Antigenic Protein versus Ny-Eso-1- Protein/ Ny-Eso-1- Antibody Immune Complex	Maysaloun Merhi *(LPI),Alexandar Khnut(Co-PI),Said Dermime*(Co-PI),Varghese Philipose Inchakalody*(Co-Investigator),Afsheen Raza*(Co-Investigator),	Research Proposal	Prospective	MRC Review
17012	The impact of New Gyn- Oncology Cancer Treatments in Qatar: Medication Use Evaluation (MUE)	Shereen Elazzazy *(LPI),Amaal Hersi Ahmed Guleid *(Co-Investigator),Hebatalla Mahmoud Afifi*(Co-Investigator),ANAS AHMAD E A HAMAD*(Co-Investigator),Arwa Sahal*(Co-Investigator),Farah I. Jibril(Co-Investigator),Aya Alasmar*(Co-Investigator),Nabil El Hadi El Sayed Ali Omer*(Co-Investigator),	Research Proposal	Retrospective Data Review	MRC Review
17022	Is cardiac patients receiving statin (Anti- Hyperlipidemia Medication) for more than one year adhere with changing their lyfestyle	Mahmoud Mohamed Emara(LPI),Fatima Rustom(Co-Investigator),Sumaya Al Yafei*(Co-Investigator),Ahmed Mahfouz*(Co-Investigator),	Research Proposal	Quality/ Performance Evaluation	MRC Review

MRC ID	Title	Investigators	Funding	Design	Status
17028	Phase 3, Double- blind, randomized, Placebo-controlled, multi center study of GBT440 administered orally to patients with Sickle Cell Disease	Mohamed Yassin*(LPI),Abdulqadir Nashwan *(Co-Investigator),Radwa Maher Mahmoud Hussein(Co-Investigator),Abeer Abou Shanab(Co-Investigator),Omer Ismail(Co-Investigator),Ganga Devi Jagadesh Babu*(Co-Investigator),Aliaa Amer *(Co-Investigator),Ahmad Al Sabbagh *(Co-Investigator),	Research Proposal	Investigational Product Clinical Trial	MRC Review
17043	Clinical outcomes of patients with advanced ovarian cancer treated with neoadjuvant chemotherapy, IDS and adjuvant chemo therapy in NCCCR	Hind El Malik*(Principal Investigator),Faroug Saleh Ali(Co-Investigator),ANAS AHMAD E A HAMAD*(Co-Investigator),Nabil El Hadi El Sayed Ali Omer*(Co-Investigator),Ammar Almadani*(Co-Investigator),	Research Proposal	Retrospective Data Review	Approved
17044	Clinical characteristics and outcomes of patients with non epithelial tumors of ovary: The Qatar experience	Ammar Almadani*(LPI),Hind El Malik*(Co-Investigator),Aladdin Kanbour(Co-Investigator),Cicy Mary Jacob(Co-Investigator),Nabil El Hadi El Sayed Ali Omer*(Co-Investigator),Ghazouani Hafedh*(Co-Investigator),	Research Proposal	Retrospective Data Review	MRC Review

MRC ID	Title	Investigators	Funding	Design	Status
17049	The pattern and outcome of malignant gestational trophoblastic neoplasia (GTN) over 5 years in Qatar	Aladdin Kanbour(LPI),Cicy Mary Jacob(Co-Investigator),Faroug Saleh Ali(Co-Investigator),Heyam Mohammed Ali Rudwan*(Co-Investigator),Nabil El Hadi El Sayed Ali Omer*(Co-Investigator),Ghazouani Hafedh*(Co-Investigator),Ammar Almadani*(Co-Investigator),Hind El Malik*(Co-Investigator),	Research Proposal	Retrospective Data Review	MRC Review
17050	Uterine Sarcomas- Clinico- pathological characteristics, treatment and outcomes in Qatar	Hind El Malik*(Co-Investigator),Hatim M A El Derhoubi*(Co-Investigator),WAFA ALSAADI(Co-Investigator),Ghazouani Hafedh*(Co-Investigator),	Research Proposal	Retrospective Data Review	MRC Review
17054	Spinal abscess caused by salmonella bacteremia in patient with primary Myelofibrosis: a rare case	Shehab F Mohamed(LPI),Firyal Ibrahim *(Co-Investigator),Mohamed Yassin*(Co-Investigator),Abdulqadir Nashwan *(Co-Investigator),Dina Sameh A. Soliman(Co-Investigator),	Research Proposal	Case Report/ Case Series	MRC Review
17072	Definitive & post operative radiotherapy for cervical & endometrial cancer: A single institution results	Primoz Petric(LPI),Rabih Hammoud(Co-Investigator),Suparna Chandramouli*(Co-Investigator),Noora Al Hammadi*(Co-Investigator),	Research Proposal	Retrospective Data Review	MRC Review

MRC ID	Title	Investigators	Funding	Design	Status
17080	The Peyronie`s Disease Questionnaire (PDQ): Linguistic validity of the Arabic version.	Onder Canguven*(LPI),Reena Alassam*(Co-Investigator),Kareim Mohamed Khalafalla(Co-Investigator),Ahmed Sandly*(Co-Investigator),	Research Proposal	Quality/ Performance Evaluation	MRC Review
17093	Double Hit and double expressor lymphomas: A clinico pathological profiling of large B- cell lymphomas in Qatar	Dina Sameh A. Soliman(LPI),EINAS A/ AZIZ EID AL KUWARI*(Co-Investigator),Ibrahim Alhijji *(Co-Investigator),Ruba Taha*(Co-Investigator),Zafar Nawaz*(Co-Investigator),Firyal Ibrahim *(Co-Investigator),Ahmad Al Sabbagh *(Co-Investigator),	Research Proposal	Retrospective Study	MRC Review

MRC ID	Title	Investigators	Funding	Design	Status
17095	Dasatinib versus nilotinib as upfront therapy for treatment naive chronic myeloid leukemia chronic phase	Mohamed Yassin*(LPI),Abdulqadir Nashwan *(Co-Investigator),Radwa Maher Mahmoud Hussein(Co-Investigator),Omer Ismail(Co-Investigator),Ahmed Mohammed Basha*(Co-Investigator),Ahmed Elsaid Shady*(Co-Investigator),Sarah A. Elkourashy*(Co-Investigator),Susanna El Akiki(Co-Investigator),ANAS AHMAD E A HAMAD*(Co-Investigator),Afraa Mustafa Sulieman Fadul*(Co-Investigator),DEENA SIDEEG ABBAS MUDAWI*(Co-Investigator),Prem Chandra *(Co-Investigator),Ibrahim Alhijji *(Co-Investigator),Halima El Omri *(Co-Investigator),Shehab F Mohamed(Co-Investigator),	Research Proposal	Comparative Clinical Trial	MRC Review
17096	Tuberculosis in acute myeloid tuberculosis: Clinical, biological and radiological profile	Halima El Omri *(LPI),Ruba Taha*(Co-Investigator),Nancy Anwar Mohamed Aly Kassem*(Co-Investigator),	Research Proposal	Retrospective Study	MRC Review
17097	The impact of psychological aspect among caregivers of cancer patients	Zeinab Mohamed Idris*(LPI),Asma Mohammed(Co-Investigator),Nima Ahmed *(Co-Investigator),Khadra Yassin(Co-Investigator),Ghazouani Hafedh*(Co-Investigator),	Research Proposal	Quality/ Performance Evaluation	MRC Review

MRC ID	Title	Investigators	Funding	Design	Status
17099	Spinal cord compression secondary to extramedullary hematopoiesis: A rareness in young adult with thalassemia major	Shehab F Mohamed(LPI),Mohamed Yassin*(Co-Investigator),Dina Sameh A. Soliman(Co-Investigator),Diala Tareq Khirfan(Co-Investigator),Palmira Caparrotti(Co-Investigator),	Case Report	Case Report/ Case Series	MRC Review
IRGC-01-NI-040	MRI based radiotherapy planning of Prostate Cancer: development of a clinically feasible workflow using auto-segmentation and a novel MRI sequence	Maeve McGarry(Principal Investigator),Noora Al Hammadi*(Co-Investigator),Rabih Hammoud(Co-Investigator),Gregory Perkins(Co-Investigator),	IRGC	Retrospective Study	Ongoing
IRGC-01-SI-018	The development of a 4 dimensional motion management strategy for radiotherapy of the liver using Magnetic Resonance Imaging (MRI)	Noora Al Hammadi*(Principal Investigator),Tarraf Torfeh(Principal Investigator),Hadi Fayad(Principal Investigator),Primoz Petric(Co-Investigator),Rabih Hammoud(Co-Investigator),Gregory Perkins(Co-Investigator),	IRGC	Retrospective Study	Ongoing

MRC ID	Title	Investigators	Funding	Design	Status
IRGC-02-NI-041	Application of array based comparative genomic hybridization assay for the investigation of prognostic genomic alterations in chronic lymphocytic leukemia at diagnosis and during follow-up	Zafar Nawaz*(Principal Investigator),Firyal Ibrahim *(Principal Investigator),Ahmad Al Sabbagh *(Principal Investigator),Mohamed Yassin*(Co-Investigator),Dina Sameh A. Soliman(Co-Investigator),Hisham El Sabah(Co-Investigator),Manoj Unni(Co-Investigator),Safa Hassa Alazawi *(Co-Investigator),Halima Al Muhannadi(Co-Investigator),Mohamed Elkhalifa*(Co-Investigator),Ibrahim Alhijji *(Co-Investigator),	IRGC	Prospective Study	Awarded
IRGC-02-RF-060	Defining an immunohistochemistry-based prognostic model for diffuse large B cell lymphoma (DLBCL) in the post-rituximab era	Amna Yousif Gameil*(LPI),Enas Al Kuwari(LPI),Ibrahim Alhijji *(Co-PI),Halima El Omri *(Co-PI),Rajaa Al Abdulla (Co-Investigator),	IRGC	Mixed Design	Awarded
IRGC-02-SI-006	Qatar Childhood Cancer Support Group	Hisham Morsi*(LPI),Caroline Langford*(Co-PI),Holly Clark*(Co-Investigator),Azza Adel Hassan*(Co-Investigator),	IRGC	Prospective Study	Approved
IRGC-02-SI-010	Novel Tissue classification techniques for MR only Image Guided procedures of Brain and Head and Neck	Souha Aouadi(Principal Investigator),	IRGC	Prospective Study	Approved

MRC ID	Title	Investigators	Funding	Design	Status
IRGC-02-SI-012	Developing a vaccine against MERS in camels	Martin Bachmann(LPI),Gheyath K. Nasrallah(Co-PI),Lubna Therachiyil(Co-Investigator),	IRGC	Others	Approved
15026/15	Prevalence of Symptoms in Cancer patients receiving Palliative Care: A retrospective study	Dr. Azza Hassan	MRC	Retrospective Study	Ongoing
15056/15	Screening of Psychosocial needs among cancer patients in State of Qatar. Pilot Study	Dr. Azza Hassan	MRC	Descriptive	Ongoing
NPRP9-459-3-090	Precision immunology implications for aggressive types of breast cancer: genomic determinants of immune response to neoadjuvant chemotherapy	Dr. Salha Bujassoum (PI)	QF	Mixed design (Prospective and retrospective Study)	Active

MRC ID	Title	Investigators	Funding	Design	Status
NPRP7-136-031	Aggressive Breast Cancers in Arab Populations: CCL5 Implications as a Potential Target for breast cancer therapy	Dr. Salha Bujassoum (PI)	QF	Prospective Study	Active
15242/15	Breast cancer with hormone receptor positive clinical outcomes and prognosis	Dr. Salha Bujassoum (PI) Dr Cicy co-PI	MRC	Retrospective Study	Active
15186/15	Biologic subtypes of breast cancer in patients with brain metastasis	Dr. Salha Bujassoum (PI) Dr Cicy co-PI	MRC	Retrospective study	Active
16432/16	What is the Quality of Life of Advanced Gynecologic Malignancy Patients in National Center for Cancer Care and Research?	Wafa Alsaadi (PI); Ambareen Saleh; Hafedh Ghazouani; Dr. Hind Elmalik	MRC	A cross sectional research design/ quantitative	Active

Cancer Research Events Calendar 2018-2019

Dates	Event Title
2018	
26-28 Jan	First Qatar Cancer Imaging Conference
26-27 Jan	Doha - Heidelberg Research Conference
04 Feb	World Cancer Day
13 Feb	Qatar National Sport Day
14-20 Feb	4th wQatar Annual Radiology Review Course
22-24 Feb	Thalassemia & Sickle Cell Day
24-Feb	Ultrasound Guided Interventional Pain Procedures
1-5 Mar	Neurosurgery Review Course 2018
02-Mar	Surgical Endocrine Symposium: Parathyroid Glands
8 Mar	World Colorectal Cancer Day
8-10 Mar	2nd Qatar Neuroscience Conference 2018
20-Mar	World Oral Health Day
04-Apr	Research Forum 2018
6-7 Apr	First Annual Qatar Hematology Symposium
6th - 7th Apr	HMC Medication Safety Symposium 2018
26-28 Apr	7th Surgical Research & Innovation Ideas Symposium
09-May	4th NCCCR Nursing Grand Round
9-11 May	World No Tobacco Day on May 31
19-Sep	Uro-Oncology MDT Club Meeting - Bladder Cancer 2018
21-Sep	Surgical Endocrine Symposium "Thyroid"
4-6 Oct	Annual Breast Cancer and OB/GYN Conference
14-Oct	Research Forum 2018
11 to13 Oct	5th Qatar Internal Medicine Conference and the Best of ACP Meeting 2018
12-13 Oct	Cancer Immunotherapy Workshop
20-25 Oct	Breast Cancer Awareness Day
05-Dec	Annual Research Day 2018
8-9 Feb	2nd Doha Heidelberg Clinical, Research, Oncology Conference & 1st Rare Disease Symposium
2019	
12-Jan	1st Qatar Cardio-oncology Workshop
25-28 Jan	5th Qatar Physiotherapy Review Course
7-9 Feb	5th Qatar International Pharmacy Conference 2019
01-Mar	Surgical Endocrine Symposium (Pancreas)
5-6 April	Second Qatar Annual Hematology Symposium

Index of Researchers