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Review Article **Published Date:- 2019-12-11**

Risk factor of liver metastases in breast cancer

Objective: The liver is the second most common site of distant metastases from breast cancer. We investigated the risk factor liver metastasis in patients with breast cancer.

Methods: We studied Age, Menopausal status, Histologic Type, Tumor size, Number of cancerous axillary lymph nodes, in two groups with liver metastases with logistic regression to identify independent liver metastasis risk factors in breast cancer patients.

Results: Age, menopausal status, number of cancerous axillary lymph nodes and tumor size are the independent risk factors liver metastases in patients with breast cancer.

Conclusion: The increase number of cancerous axillary lymph nodes and tumor size may be diagnostic markers for liver metastases from breast cancer.

Review Article **Published Date:- 2019-12-10**

Different optimization strategies for the optimal control of tumor growth

In this article different numerical techniques for solving optimal control problems is introduced, the aim of this paper is to achieve the best accuracy for the Optimal Control Problem (OCP) which has the objective of minimizing the size of tumor cells by the end of the treatment. An important aspect is considered, which is, the optimal concentrations of drugs that not affect the patient's health significantly. To study the behavior of tumor growth, a mathematical model is used to simulate the dynamic behavior of tumors since it is difficult to prototype dynamic behavior of the tumor. A tumor-immune model with four components, namely, tumor cells, active cytotoxic T-cells (CTLs), helper T-cells, and a chemotherapeutic drug is used. Two general categories of optimal control methods which are indirect methods and direct ones based on nonlinear programming solvers and interior point algorithms are compared. Within the direct optimal control techniques, we review three different solutions techniques namely (i) multiple shooting methods, (ii) trapezoidal direct collocation method, (iii) Hermit- Simpson's collocation method and within the indirect methods we review the Pontryagin's Maximum principle with both collocation method and the backward forward sweep method. Results show that the direct methods achieved better control than indirect methods.

Case Report **Published Date:- 2019-10-28**

Stercoral perforation: A rare case and review

We present a 54-year-old male with abdominal pain, Vomiting and weight loss since 5 months. Perforation was noted at recto-sigmoid junction and underwent Hartman's procedure with end colostomy. Histology of sigmoid colon confirmed a Stercoral perforation without any evidence of dysplasia or malignancy. Patient had chemotherapy for squamous cell carcinoma (SCC) of epiglottis a year ago and was on codeine phosphate and Oromorph as and when required since his treatment for SCC for pain. Patient also had been suffering from constipation since he finished chemotherapy. Stercoral perforation always need to kept in mind in patients who present with constipation and need to take all patients who present with chronic constipation and initiate measures we encounter commonly in everyday practice. We present a brief review about Stercoral perforation and its management.

Research Article **Published Date:- 2019-09-27**

Results of chemotherapy in the treatment of chronic lymphoid leukemia in Black Africa: Experience of Côte d'Ivoire

Background: The treatment of chronic lymphoid leukemia currently uses news drugs which are more expensive in our countries. Its why, the results of chemotherapy remains a challenge in our sector.

Aims: To evaluate the place of polychemotherapy in the treatment of chronic lymphoid leukemia in black Africa.

Methods: It was a prospective, descriptive, analytic and non-comparative study, concerning the records of patients with chronic lymphoid leukemia treated and followed at the department of clinical hematology in Abidjan.

Results: We included 56 patients. The average age was 62 years with extremes of 38 and 84 years. The sex ratio was 0.8 in favor of female. The clinical signs noted a tumor syndrome among which splenomegaly, classified stage III (46, 43%) and adenopathy (64, 29%). Biologically, we observed a blood lymphocytosis (50%), an anemia (39.29%) and a thrombocytopenia (62.50%). The majority of patients were classified stage A of BINET (51.79%). The COP protocol (44.64%) and the monochemotherapy with chlorambucil (39.29%) were the most used. The therapeutic response of polychemotherapy was low (12.5%) compared to 35, 71% for monochemotherapy (p = 0.0001) with overall survival significantly better in monochemotherapy. The outcome of patients used polychemotherapy were more adverse that of patients used chlorambucil alone (p = 0,003). The overall probability of survival at 12 months was 90, 9% for patients who used monochemotherapy and 63, 4% for polychemotherapy.

Conclusion: Polychemotherapy in chronic lymphoid leukemia of black African has an adverse therapeutic response hence the interest of using new therapeutic possibilities.

Research Article **Published Date:- 2019-08-21**

Risk factors of survival in breast cancer

Background: In this study, we aimed to investigate the role of prognostic factors on breast cancer survival in Iran.

Methods: This study was carried out using data from 500 participants with breast cancer. Data were gathered from medical records of patients referring to four breast cancer research centers in Esfahan, Iran, between 1990 – 2000. Age at diagnosis (year), size of tumor, Involve lymph nodes, tumor grade, and family history and married were the prognosis factors considered in this study. A Cox model was used.

Results: The median follow-up period was 29.71 months with the interquartile range of 19-61 months. During the follow-up period, 57 (10%) patients died from breast. The Cox model showed that number of lymph nodes involved, and the tumor size and grade tumor are the prognostic factors survival in breast cancer.

Conclusion: This study, confirmed the importance of early diagnosis of cancer before the involvement of lymph nodes and timely treatment could lead to longer life and increased quality of life for patients.

Review Article **Published Date:- 2019-07-29**

Fifth "dark" force completely change our understanding of the universe

For something that's literally as old as the universe, dark matter doesn't get much attention outside scientific circles. Maybe that's because, other than a short-lived SyFy series and a late-period Randy Newman album, this nebulous star stuff has had a tough time breaking the pop-culture barrier. But the truth is that today, dark matter has never mattered more. Our own Milky Way is embedded in a massive cloud of it, we're looking for its interactions deep inside the earth, and there are whole galaxies without it. So what is dark matter, anyway? Why can't scientists get enough of the stuff, even though they can't actually find it? What deep, dark secrets does it hold? And could it ultimately shape the future of life as we know it?

Research Article **Published Date:- 2019-07-02**

Insilico investigation of TNFSF10 signaling cascade in ovarian serous cystadenocarcinoma

The ovarian serous Cystadenocarcinoma shared large number of deaths in gynecologic carcinoma. It has various numbers of molecular events from initiation to progression and at advance stage, surgery is the end product of such molecular signaling. We assess in this study the whole mechanistic view of TNFSF10 network which has the ideal apoptotic causing identity. We used fresh insilico strategy to uncover the secrets and inter-links from its protein-protein interaction complex. We retrieved the TNFSF10 signaling network from STRING database (www.string-db.org). The network contains 25 nodes and 152 edges with clustering presentation. After retrieval, we performed gene enrichment and characterization analysis of network from WebGestalt toolkit (www.webgestalt.com). Finally, we examined the participation of whole network in ovarian cancer progression from cBioPortal, a cancer genomic data portal (www.cbioportal.org). Our results showed that majority of cases have loss of function of death receptors (DR4 and DR5) that are the main unit of initiation of apoptotic signaling. Most of downstream signaling members showed amplification that regulates cell proliferative pathways including NFkB pathway. TNFSF10 cluster has loss of function and in future it gain attention for further research studies to discover its interactome level view for valuable therapy. FAS cluster has large number of members and majority showed amplification rendering them as co-targets for combinational drug designing.

Research Article **Published Date:- 2019-01-14**

Endogenus toxicology: Modern physio-pathological aspects and relationship with new therapeutic strategies. An integrative discipline incorporating concepts from different research discipline like Biochemistry, Pharmacology and Toxicology

Many pathologic disease can be considered as related to an Endogenous toxicological moves and in time dependent way (kinetics and dynamic of the process). In this work starting from the analysis of relevant literature involved with different disease and related to the endogenous local micro- environment some global conclusion useful as new tools for innovative pharmacological strategies will be submitted to the researcher. Physiology, pathology concept linked to the endogenous toxicological local micro-environment status as new research instruments. The same carcinogenesis process can be related also to endogenous agents that may have a major contribution in spontaneously process. (Reactive oxygen species (ROS), which are involved in multiple cellular processes by physiologically transporting signal as a second messenger or pathologically oxidizing DNA, lipids, and proteins).
