1. Ravikumar M, Boyer AL, Shoales

J Gulf J Oncolog. 2011 Jul;1(10):11-7 international

**Comparison of IMRT and Rapidarc treatment plans using AAPM task group test suites**

Abstract

The purpose of this study is to examine the plan quality and monitor unit with sliding window IMRT and RapidArc (RA) treatment plans using American Association Physicists in Medicine TG119 test suite DICOM-RT images and structure sets. The structure set includes multi-target (superior, central, inferior), prostate, head and neck and C-shape. Plans were performed with Eclipse planning system using AAA algorithm with the plan goals specified in TG119. The plan results for multtarget shows that the D99 is greater than the plan goal for all the targets. The D10 is less than the plan goal for superior and inferior targets in both IMRT and RA plans. The D10 is 5% more with IMRT plan and 7% more with RA plan for central target in comparison with plan goal. The plan results for prostate shows that D95 is greater than the plan goal for both IMRT and RA plans. The D5 is less than the plan goal for IMRT plan and almost equal to plan goal for RA plan. The D30 is less than the plan goal for bladder and rectum in both the plans. The D10 is higher than the plan goal by 1.9% and 2.5% in IMRT and RA plan for rectum. The plan results for head and neck shows that the D99 and D90 were greater than the plan goal for PTV. The spinal cord and parotid doses were less than the plan goal in both the plans. The plan results for C-shape shows that the D95 was greater than the plan goal and D10 was less than the plan goal for PTV. The dose to central core was less than the plan goal in both IMRT and RA plans. Both the IMRT and RapidArc plans have met the plan goal for all the target and normal structures. RapidArc optimization and treatment planning requires more time than the IMRT plan. The monitor unit calculated by the RapidArc plan is less compared to IMRT plan, which reduces the treatment error caused by patient motion during treatment and integral dose. Keywords: IMRT, RapidArc, AAA, MLC, Treatment planning.

2. Rohan Bhise, Sanhya Appachu K.C. Lakshmaiah Govindababu


**Systemic Therapy in Soft Tissue Sarcomas: Past, Present and Future**

Abstracts

Soft tissue sarcomas (STS) comprise 1% of all cancers diagnosed worldwide with more than 40 different histological subtypes each with distinct underlying biology, natural history and response to treatment. Due to the differential chemosensitivity it is imperative to have a correct histological diagnosis for optimal treatment of these patients. Even though surgery remains the primary modality of treatment there is increasing specialization of chemotherapy with respect to histological subtype. In general there is no place for “one size fits all strategy”. To correctly define the role of chemotherapy, an extensive search was carried out online and offline for all relevant articles concerning chemotherapy in soft tissue sarcoma. This review aims to discuss the evolution of chemotherapy, its present role in neoadjuvant, adjuvant, metastatic settings and exciting trends with the advent of targeted therapies.

3. CS Premalata, CR Rao, DS Madhumathi, L Lakshmidevi, D Lokanatha

Indian journal of cancer 2011, 48:3:380-381

**Leukemic relapse masquerading as a breast lump: An unusual manifestation**

Abstracts

A 21-year-old female came to the hospital with a history of fever, generalized weakness, and weight loss since 3 months. On examination, the patient was pale with evidence of gum bleeding. Multiple cervical lymphnodes were enlarged and there was mild hepatosplenomegaly. Complete blood count showed pancytopenia. Bone marrow aspiration was markedly hypercellular with sheets of blasts forming 80% of the
nucleated marrow cells. Cytochemical stains for myeloperoxidase and periodic acid Schiff (PAS) were negative. Routine cytogenetic analysis showed the karyotype - 52XX, +X, +1, -2, +12, +14, +15, +19, +20, suggestive of hyperdiploid acute lymphoblastic leukemia. A morphological diagnosis of acute lymphoblastic leukemia (ALL) - L2 (FAB classification) was rendered. Cerebrospinal fluid examination was normal.

4. Rani James, K. Thriveni, Lakshmi Krishnamoorthy, Vijayalaxmi Deshmane,* P.P. Bapsy,** and Girija Ramaswamy


Clinical outcome of adjuvant endocrine treatment according to Her-2/neu status in breast cancer

Abstracts :

Background objectives:

An association between over-expression of proto-oncogene Her-2/neu and resistance to tamoxifen in estrogen receptor (ER) positive, primary and metastatic breast cancer has been suggested. HR+/Her-2/neu+ patients have a poor response to endocrine therapy, making this group a matter of debate. The present study was carried out to examin whether Her-2/neu expression in breast cancer patients predicted tamoxifen effectiveness.

Methods:

An enzyme-linked immunosorbent assay (ELISA) specific for the extracellular domain of the Her-2/neu oncoprotein product was used to detect serum Her-2/neu levels in 207 patients with histological confirmed breast cancer. Tissue Her-2/neu expression was studied in 100 breast cancer patients by immunohistochemistry (IHC) and compared with serum Her-2/neu levels by ELISA.

Results:

Among 207 histologically confirmed breast cancer patients, 53 were serum Her-2/neu positive. Patients who were treated with surgery, chemotherapy, and radiotherapy showed significantly (P<0.05) reduced serum Her-2/neu levels, showing good response to treatment. Patients who were treated with tamoxifen in addition to the above regimen did not show any significant reduction in serum Her-2/neu levels showing resistance to treatment.

Interpretation & conclusions:

The present findings study support the hypothesis that Her-2/neu overexpression contributes to tamoxifen resistance. Trastuzumab or other growth factor inhibitors should be used in combination with tamoxifen, since monotherapy is not likely to be optimal in HR+/Her-2/neu+ tumours.

Keywords: Breast cancer, ELISA, estrogen receptor, Her-2/neu, tamoxifen

5. Mahua Sinha, Seemanthini Desai,1 Sumant Mantri,2 and Anuja Kulkarni3 DOI: 10.4103/0019-5049.82676

Indian journal Anaesthesia , 2011:55:3,266-271

Procalcitonin as an adjunctive biomarker in sepsis

Abstracts :-
Sepsis can sometimes be difficult to substantiate, and its distinction from non-infectious conditions in critically ill patients is often a challenge. Serum procalcitonin (PCT) assay is one of the biomarkers of sepsis. The present study was aimed to assess the usefulness of PCT assay in critically ill patients with suspected sepsis. The study included 40 patients from the intensive care unit with suspected sepsis. Sepsis was confirmed clinically and/or by positive blood culture. Serum PCT was assayed semi-quantitatively by rapid immunochromatographic technique (within 2 hours of sample receipt). Among 40 critically ill patients, 21 had clinically confirmed sepsis. There were 12 patients with serum PCT ≥10 ng/ml (8, blood culture positive; 1, rickettsia; 2, post-antibiotic blood culture sterile; and 1, non-sepsis); 7 patients with PCT 2-10 ng/ml (4, blood culture positive; 1, falciparum malaria; 2, post-antibiotic blood culture sterile); 3 patients with PCT of 0.5 to 2 ng/ml (sepsis in 1 patient); and 18 patients with PCT < 0.5 ng/ml (sepsis in 2 patients). Patients with PCT ≥ 2 ng/ml had statistically significant correlation with the presence of sepsis (P<0.0001). The PCT assay revealed moderate sensitivity (86%) and high specificity (95%) at a cut-off ≥ 2 ng/ml. The PCT assay was found to be a useful biomarker of sepsis in this study. The assay could be performed and reported rapidly and provided valuable information before availability of culture results. This might assist in avoiding unwarranted antibiotic usage.

Keywords: Blood culture, immunochromatographic assay, procalcitonin, sepsis

6. P Saraswathi Devi
Idian journal of palliative care, 2011:S14-S16

A Timely Referral to Palliative Care Team Improves Quality of Life
Abstracts :-

In the trajectory of disease progress and treatment plan, patients and the family members are confronted with challenging situations like unsurmountable physical distress, inadequate coping patterns, unanswered spiritual issues in the background of serious threat to very existence of life leads to a debilitating Quality of life. The Palliative Care team approach addresses all the issues and also sees the patient to go through the protocols of Palliative care management as well as Oncological treatment plan. Further, this facilitates a smooth transition from the hospital to home and hospice care. Various studies conducted globally revealed that patients received palliative care intervention along with oncological treatments had higher scores of Quality of life compared to patients received only oncology care alone. This article discusses the various factors contributing to late referrals to palliative care team and also care giver's views pertaining to need for early referral. Timely referral to palliative care minimises the patient's and care giver's distress, ensures modest Quality of life and appropriate measures at the end of life care.

7. Anand B Ramesh C, Appaji L, Kumari BS, Shenoy AM, Nanjundappa, Jayashree RS, Kumar RV.
British journal of opthomology, 2011; 94:7, 1014-8

Prevalence of high-risk human papillomavirus genotypes in retinoblastoma
Abstracts :

Background The human papillomavirus (HPV) is an important aetiological agent in cancer but its involvement in retinoblastomas (RBs) is controversial.

Methods 64 formalin-fixed paraffin-embedded tissue blocks and 19 fresh-frozen specimens were subjected to multiplex PCR using PGMY09/11 primers, HPV genotyping, non-isotopic in situ hybridisation and immunohistochemistry for pRb and p16INK4a.

Results 24% of RBs contained HPV DNA. 90% of HPV genotypes were of high-risk (HR) type and 10% were of intermediate-risk (IR) type. HR HPVs 45, 59, 68 and 52 were detected for the first time, as were IR HPVs 82 and 73. There was only one HPV 18-positive case. Interestingly, no low-risk genotypes were identified. Nine formalin-fixed paraffin-embedded HPV-positive cases showed nuclear HPV positivity by non-isotopic in situ hybridisation. Immunohistochemistry did not show pRb expression in 67% of cases. 34% expressed
nuclear p16INK4a, of which 20 cases were also positive for HPV by multiplex PCR. A statistically significant association between HPV and pRb expression status was observed (p=0.0001). The association of HPV with p16INK4a expression was also statistically significant (p=0.0001).

Conclusions While the presence of HPV in a subset of RB was demonstrated, its role in carcinogenesis needs further elucidation.

8. Bhattacharyya1, J Biswas2, K Govindbabu3, AA Ranade

Indian journal of cancer, 2011, 48:3, 279-81

Uncommon versus taken for granted: Both need to be addressed

Abstracts :
This issue contains two important articles on cancer affecting the head and neck region, one of which is rare and the other common. [1,2] This editorial will comment on both of them. The watchword is "early detection and referral to a multidisciplinary team or experienced centre". For sarcomas of the head and neck an urgent referral should be made for a palpable lump, which has not been diagnosed before and one which has changed over a period of 3 - 6 weeks. Similarly, for an existing lump greater than 5 cm in size, deep to the fascia, fixed or mobile, painful, increasing in size and recurring after a previous excision, the referral must be urgent. [7]

9. Sundaram Thangavelu1, S Jayakumar2, KN Govindarajan2, Sanjay S Supe3, V Nagarajan1, M Nagarajan1

journal of medical physics, 2011:36:1, 29-34

Influence of photon energy on the quality of prostate intensity modulated radiation therapy plans based on analysis of physical indices

Abstracts :-

The goal of the present study was to study the effects of low- and high-energy intensity-modulated photon beams on the planning of target volume and the critical organs in cases of localized prostate tumors in a cohort of 8 patients. To ensure that the difference between the plans is due to energy alone, all other parameters were kept constant. A mean dose volume histogram (DVH) for each value of energy and for each contoured structure was created and was considered as completely representative for all patients. To facilitate comparison between 6-MV and 15-MV beams, the DVH-s were normalized. The different parameters that were compared for 6-MV and 15-MV beams included mean DVH, different homogeneity indices, conformity index, etc. Analysis of several indices depicts more homogeneous dose for 15-MV beam and more conformity for 6-MV beam. Comparison of all these parameters showed that there was little difference between the 6-MV and 15-MV beams. For rectum, 2 to 4 % more volume received high dose with the 6-MV beam in comparison with the 15-MV beam, which was not clinically significant, since in practice much tighter constraints are maintained, such that Normal Tissue Complication Probability (NTCP) is kept within 5 %. Such tighter constraints might increase the dose to other regions and other critical organs but are unlikely to increase their complication probabilities. Hence the slight advantages of 15-MV beam in providing benefits of better normal-tissue sparing and better coverage cannot be considered to outweigh its well-known risk of non-negligible neutron production.


Br J Ophthalmol 2011;95:7 1014-1018

Abstracts :-
Background The human papillomavirus (HPV) is an important aetiological agent in cancer but its involvement in retinoblastomas (RBs) is controversial.

Methods 64 formalin-fixed paraffin-embedded tissue blocks and 19 fresh-frozen specimens were subjected to multiplex PCR using PGMY09/11 primers, HPV genotyping, non-isotopic in situ hybridisation and immunohistochemistry for pRb and p16\(^{INK4a}\).

Results 24% of RBs contained HPV DNA. 90% of HPV genotypes were of high-risk (HR) type and 10% were of intermediate-risk (IR) type. HR HPVs 45, 59, 68 and 52 were detected for the first time, as were IR HPVs 82 and 73. There was only one HPV 18-positive case. Interestingly, no low-risk genotypes were identified. Nine formalin-fixed paraffin-embedded HPV-positive cases showed nuclear HPV positivity by non-isotopic in situ hybridisation. Immunohistochemistry did not show pRb expression in 67% of cases. 34% expressed nuclear p16\(^{INK4a}\), of which 20 cases were also positive for HPV by multiplex PCR. A statistically significant association between HPV and pRb expression status was observed (p=0.0001). The association of HPV with p16\(^{INK4a}\) expression was also statistically significant (p=0.0001).

Conclusions While the presence of HPV in a subset of RB was demonstrated, its role in carcinogenesis needs further elucidation.

11. SB Gurusidappa\(^1\), HS Mamatha\(^2\)


Fusarial skin lesion in immunocompromised

Abstracts:

Fungi, previously considered to be harmless colonizers, are now emerging as a significant pathogen in immunocompromised patients, in particular reference is the Fusarium species.\(^{[1]}\)

A 6-year-old male child diagnosed as acute lymphocytic leukemia (ALL) was admitted with history of high grade, intermittent fever, and history of left knee injury since 2 months. On examination, the patient was febrile and pale with left cervical lymphadenopathy. A hematoma (4 cm × 4 cm) was present over left knee joint. X-ray of left knee showed evidence of swelling with collection of fluid within the joint. Diagnosis was acute arthritis, probably traumatic arthritis. Patient was put on parenteral cefuroxime and tobramycin. Slough excision and debridement of wound was done under general anesthesia. Conventional culture of the excised wound on McConkey and to blood agar plates grew pinkish-white and white colonies, respectively, after 24 h. Sabouraud's dextrose agar plates showed pinkish-white, cottony growth. Lacto phenol cotton blue preparation showed septate branching hyphae with clusters of sickle-shaped microconidia. The above morphological features were confirmed by slide culture technique. Consecutive three samples yielded same growth. The pathogen was confirmed as Fusarium oxysporum [Figure 1] I.V. amphoepticin-B was changed to ketoconazole (an azole group of antifungal agent) after which there was marked improvement in healing of the lesion.