RPS 1314-9

Breast cancer patient viewpoint versus staff thoughts regarding mammography and radiation therapy services

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Purpose: The purpose was to compare breast cancer patients' opinions about mammography and radiation therapy services to what health care staff thought to be success factors for these services.
Methods or Background: Patient data was collected from breast cancer patients (n=14) by using open-ended online questionnaires via the websites and social media of national breast cancer patient organisations in four countries. In addition a web-based open-ended questionnaire was sent to breast care hospitals located in four different countries, focusing on four professional groups: diagnostic radiographers, radiation therapists, breast cancer nurses and biomedical laboratory scientists (n=23). Both data sets were analysed using deductive thematic analysis.
Results or Findings: In regard to both services, patients emphasise competent staff, good information and smooth-flowing, comfortable and individual services. Staff tend to put more emphasis on patient characteristics and the technical performance features of the process. Common aspects for both patients and staff are understanding the importance of aftercare and follow-up, and the fact that the patient should be given a chance to keep in close contact with care and treatment staff even after their active treatment process has finished.
Conclusion: Patients and health care staff view mammography and radiation therapy services somewhat differently. Patients put more emphasis on non-clinical issues and staff focus more on patient related and technical factors. Both patients and staff should be involved in planning services for breast cancer patients.
Limitations: Limitations associated with self-reporting instruments apply to this study.
Ethics committee approval: Not applicable.
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10:30-12:00 **Room E1**

Research Presentation Session: GI Tract

RPS 1301

Inflammatory bowel disease and perianal fistula: what's new?

Moderator
G. Masselli; Rome/IT

RPS 1301-2

Radiomics as a tool to predict surgery at 10 years in Crohn's disease

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Purpose: The aim of this study is to assess the capability of radiomics to predict the need for surgery in patients with Crohn's disease (CD).
Methods or Background: A cohort of 30 patients with CD that had undergone one or more CT-enterographies between 2009 and 2011 was retrospectively selected. A total of 44 CT scans were examined by an expert radiologist who generated a region of interest (ROI) segmentation for each pathological intestinal tract found, obtaining 93 lesions overall for radiomic analysis. A dedicated software extracted 217 radiomic features from each ROI. Patients charts were reviewed to evaluate if patients underwent surgery in a 10-year follow-up for a binary classification. A logistic regression model was built with the selected features and evaluated by computing the area under the curve (AUC) of the receiver operating characteristic (ROC) curve. Accuracy, sensitivity, specificity, positive and negative predictive values (PPV, NPV) of the model were calculated.
Results or Findings: Two radiomic features were found to be statistically significant in predicting the need for surgery in the fitted logistic regression model ($p < 0.0001$): grey level histogram variance and grey level non-uniformity. This model presented an AUC of 0.83, with a confidence interval of 95% in predicting surgery. Mean values of the model performance metrics over the cross-validation iterations were: accuracy 0.78 (0.02), sensitivity 0.68 (0.14), specificity 0.86 (0.07), PPV 0.72 (0.12), NPV 0.83 (0.09).
Conclusion: Radiomics could be a helpful tool to identify high risk for surgery patients. Early identification of such patients may influence their treatment choice during the course of the disease, avoiding unnecessary medical therapy.
Limitations: Further studies are required to obtain larger and external validations of this model.
Ethics committee approval: Not applicable
Funding for this study: There is no funding to report.
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RPS 1301-3

Machine learning model incorporating computed tomography body composition features for predicting the response to mesalamine treatment in Crohn's disease

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Purpose: Mesalamine is a common treatment for Crohn's disease but is not effective in all patients. This study aimed to develop a machine learning model incorporating computed tomography body composition features to improve prediction of mesalamine treatment response in Crohn's disease.
Methods or Background: 107 patients with confirmed Crohn's disease who were treated with mesalamine were retrospectively included and separated randomly into a training and a validation group. The prediction models were developed using machine learning methods (least absolute shrinkage and selection operator, random forest, and support vector machine [SVM]) using just clinical/laboratory values (SVM-Clinic-Labtest), using computed tomography body composition features and clinical/laboratory values (SVM-Combined), or using multivariable logistic regression (LR).
Results or Findings: After incorporating body composition features, the SVM-Combined model showed good discrimination between the responder and non-responder groups, with an area under the curve of 0.953 (95% CI: 0.883 to 1.000) in the training group and 0.957 (95% CI: 0.957 to 1.000) in the validation group. This was significantly higher than for the SVM-Clinic-Labtest model (area: training group, 0.910 [95% CI: 0.799 to 1.000]; validation group, 0.910 [95% CI: 0.841 to 0.980]), and LR model (area: training group, 0.625 [95% CI: 0.413 to 0.837]; validation group: 0.788 [95% CI: 0.686 to 0.890]). Favourable calibration performance and clinical applicability of the machine learning model were observed using calibration and decision curve analysis.
Conclusion: We developed a machine learning model incorporating computed tomography body composition features along with clinical/laboratory values, which could aid in predicting mesalamine treatment response in Crohn's disease patients.
Limitations: Not applicable
Ethics committee approval: This retrospective study was approved by the ethics committee and Institutional Review Board in Xiangya Hospital of Central South University, P. R. China (IRB No.202104078).
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RPS 1301-4

The development and value of magnetic resonance activity evaluation index without contrast agent injury in Crohn's disease

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Purpose: This study aimed to develop a simple magnetic resonance index of activity to evaluate Crohn's disease activity.
Methods or Background: Eighty-two Crohn's disease patients with terminal ileal involvement, who underwent magnetic resonance enterography, were retrospectively analysed. Magnetic resonance variables included bowel wall