Methods or Background: Datasets were analysed before the start of proton therapy and at follow-up at 3, 6 and 9 months after the end of treatment. Multiparametric maps (ADC, D, D* and f) were created, and for each patient the total number of white matter voxels, the total volume included in the contours (mm3) and the average intensity of voxels with the relative standard deviation (SD, σ) was calculated.
Results or Findings: The results obtained concerning the mean intensity values (mm2/s) of ADC, D, D* and f show a homogeneous trend with small discrepancies between: ADC=0.79x10-3 mm2/s (±150.3628 mm2/s); D=0.70×10−3 mm2/s (±159.0189 mm2/s) D*=1.3×10^2 mm2/s (±0.0335 mm2/s); f=1.1x10 mm2/s (±0.1052 mm2/s). D has a value similar to ADC, but is larger as it takes into account as a loss contribution to the signal not only perfusion but also the effect of diffusion; D* as a result of micro-perfusion in capillaries is shown to be greater than D.D* as well as f, due to the inability to acquire images at low b-values (0-50 s/mm2), where micro-perfusion makes a greater contribution to signal loss than DWI.
Conclusion: In conclusion, it was observed that the ADC value obtained from DWI sequences is (0.79 x 10-3 mm2/s) in line with the expected values in the literature of neuro-oncological studies (0.319-1.05×10-3 mm2/s). DWI-MRI and IVIM-MRI techniques will contribute diagnostic improvement, both in the field of research and clinics.
Limitations: Not applicable.
Ethics committee approval: Not applicable.
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RPS 214-5

Women's positive and less positive experiences of mammography and radiotherapy services during their breast cancer care pathway

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Purpose: The purpose is to describe women's positive and less positive experiences of mammography and radiotherapy services during their breast cancer care pathway.
Methods or Background: Data was collected by using open-ended online questionnaires via the websites and social media of national breast cancer patient organisations in four countries. The announcement was targeted at patients having finished their breast cancer treatments a maximum of six months before responding. Data comprising 14 women's responses was analysed by deductive thematic analysis.
Results or Findings: Reported positive and less positive aspects of mammography services were associated with how painful or unpleasant women perceived the examination, patient-staff relationships and in addition as a positive aspect, having scheduled the appointment quickly. In relation to radiotherapy, both positive and negative experiences focused on the way treatment was organised and delivered and how staff treated and encountered women. In addition, as a positive aspect easy-going treatment was mentioned, and as a less positive aspect, side-effects of radiotherapy were brought up.
Conclusion: Though many of the positive and less positive experiences women had in mammography and radiotherapy were the same, there were also differences. Targeted interventions at each patient contact point in the process should be planned, to improve the quality of breast cancer care.
Limitations: Limitations associated with patient-reported data apply to this study. Patient reported experience data should be interpreted with caution, as reported positive experiences might neither reflect high quality care nor satisfied patients.
Ethics committee approval: Not applicable.
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Patients' perceptions of the skills and competencies of therapeutic radiographers across Europe

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Purpose: Variation in training and education of therapeutic radiographers (TRs) across Europe leads to differences in roles and staff autonomy in clinical practice. The aim of this study was to gain insight into patients' perceptions of the skills and competencies of TRs to help inform undergraduate curricula across Europe.
Methods or Background: Ethical permission was sought and obtained from Ulster University, Belfast, UK. An electronic survey was performed using Qualtrics® and a hard copy questionnaire was distribution to radiotherapy patients across the UK, Portugal, Malta, and Poland. Patients >18 years currently receiving, or who had received radiotherapy within the last 24 months, were included. Data analysis was performed with the aid of SPSS version 27.
Results or Findings: Data collection was ongoing until December 2021. Preliminary results from the UK and Portugal show that 331 survey responses have been collected from patients who have received radiotherapy both pre and post the COVID-19 pandemic. The vast majority of patients felt TRs had the required competencies to listen, understand and communicate compassionately. Conflicting opinions arose over whether patients wanted staff to ask them about their life and be more aware of them 'as a person'.
Conclusion: Patients perceive the TR more in terms of their personal attributes rather than their professional competencies. While they may not always remember specific details of what the TRs do with/to them, they tend to remember and focus on how TRs made them feel.
Limitations: Not all European countries were involved in this study, hence, the findings may not represent the breadth of patient experiences throughout Europe. Further research could be conducted internationally.
Ethics committee approval: Integrated Research Applications System: 277006 REC reference: 20/YH/038; Institute of Nursing Health Research Ethics Committee UU, Ref No: FCNUR-20-035
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Image quality assessment of 2D mammograms for missed, discordant and concordant screen-detected cancer, and interval cancers in population-based screening with independent double reading

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Purpose: To investigate whether reduced image quality (PGMI) or compression force (CF) might have contributed to false negative interpretations of screening-detected (SDC) and interval (IC) cancers.
Methods or Background: Oslo Tomosynthesis Screening Trial (OTST) included four independent arms comparing double-reading 2D versus DBT. Exams with prospectively true positive (TP) score in all four arms were excluded (n=100). 130 women with screen-detected cancers (SDC) had at least one false-negative score. 51 women were diagnosed with interval cancer (IC). Four radiologists retrospectively classified the 2D screening mammograms of these 181 women as true negative (TN, cancer not visible), non-specific minimal sign (ns-m.s.), significant minimal sign (s-m.s.), and false negative (FN). 2D mammograms with negative score at double reading, but retrospectively classified as s-m.s. and FN were included for analysis. In a retrospective consensus-meeting three radiographers PGMI assessed image quality of CC+MLO images separately using criteria from the quality-assurance-manual (QAM) from BreastScreen Norway: perfect-good (P+G) >75%, moderately-good (M) <22%, inadequate (I) <3%. QAM recommend compression-force (CF) between 10-18N, usually between 12-15N. CF was registered for all images.
Results or Findings: Final material included 2D mammography for 108 women of which 23 had concordant TP, 52 had discordant scores, and 33 FN after excluding TN and ns-m.s. for DBT-only detected cancers (n=28) and IC's (n=45). PGMI result for concordant TP P+G 73%, M 24%, I 3% with CF 12,8N; discordant P+G 72%, M 21%, I 7% with mean CF 12.4N; FN: P+G 73%, M 20%, I 7% with mean CF 12.5N.
Conclusion: Our study did not show any significant difference in PGMI scores between concordant or discordant positives and false negatives. The overall lower PGMI scores did not obviously influence cancer detection. Compression-force for all examinations was within recommendations.
Limitations: No limitations were identified.