

Improving patient understanding of GEP test results (IMPARTER4): An RCT.

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Background: We developed two 8 min films to aid patients' understanding about gene expression profiling (GEP) tests (Oncotype DX or Prosigna) in breast cancer. A previous study of 120 women without breast cancer demonstrated significantly better knowledge after film viewing compared to that after reading written materials (1). We present results of an RCT testing the films' utility when given in clinics to women with early HR+ breast cancer for whom the benefit of chemotherapy was uncertain. **Methods:** Standard information policies about GEP testing differ, some clinics may provide patients with leaflets, others only verbal information. Patients who had consented to a GEP test were invited to join IMPARTER4. At baseline they completed anxiety trait/state and intolerance of uncertainty (IoU) questionnaires and were then randomized to Gp A (hospitals' standard information alone) or Gp B (standard information plus the relevant GEP patient film). Prior to learning their risk of recurrence scores, researchers interviewed patients and probed their understanding and knowledge about GEP testing together with the role risk scores had in helping determine management options (hormone therapy plus or minus chemotherapy). Following test result discussions with oncologists, patients completed two further questionnaires measuring anxiety and decisional conflict. Treating physicians all completed IoU questionnaires once at baseline, Satisfaction with their clinical interviews conducted with patients about risk scores and management decisions was measured using a study specific questionnaire. **Results:** To date 225/230 patients from 18 UK hospitals (Gp A (standard information alone) n=103; Gp B (standard plus information film) n=122) were seen by 79 physicians. Socio-demographics, anxiety trait/state and IoU did not differ between groups. Prior to the results discussion, written information was given to 128/225 (56.9%), (66 in Gp A, and 62 in Gp B). Linear regression analyses (adjusted for age and education) showed that mean knowledge scores were higher in those receiving standard information plus the film (Gp B), (2.5 points (95% C.I.:1.7-3.4) $p<0.001$). There was a trend for longer consultations in those patients having standard information alone (Gp A) (12.6% v 8.2%), who also asked more difficult questions (9.7% v 2.5%). **Conclusions:** Patient information films significantly improved knowledge about GEP tests and recurrence risk results compared to standard verbal and written information alone. Furthermore, the films appeared to enable shorter, more informed discussions between patients and their oncologists about the addition of chemotherapy to hormone therapy alone. Versions in Spanish, Italian, French, Urdu, Hindi, Gujarati, Punjabi, and Bengali are freely available. 1. Fallowfield et al, Br Ca Res & Tmt. 2022. Clinical trial information: 28497350. Research Sponsor: Breast Cancer Research Foundation (BCRF).