Enhanced decision-making about adjuvant chemotherapy in early breast cancer following EndoPredict testing
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Background:
• Balancing harms and putative benefits of treatment is a vital component of decision-making. Chemotherapy side-effects may be more tolerable if recurrence risk is reduced substantially. Over-treatment with drugs that make little difference to a patient’s risk of recurrence is unacceptable.
• Gene expression profiling tests can help with the estimation of risk. EndoPredict© is a multigene test which, together with clinico-pathologic parameters, produces an EPClin score that classifies risk of distant recurrence as low or high.
• We examined decisions pre & post EndoPredict© testing in patients with early stage, ER+ve, HER2-ve breast cancer, judged to have equivocal indications for adjuvant chemotherapy.

Aims:
To compare pre and post EndoPredict© testing:-
• Patients’ anxiety and decisional conflict
• Oncologists’ confidence about treatment decisions made (endocrine therapy +/- chemotherapy)

Methods
• Potential treatments discussed with patients based on usual prognostic factors
• Decisions recorded and doctors charted their confidence about these
• EndoPredict© test and study was explained
• Consenting patients completed Decisional Conflict Scale (DCS) and Spielberger state/trait anxiety inventory (STAI)
• Patients returned to discuss test results and completed further DCS and STAI
• Doctors recorded confidence about decisions

Results:
• 14 oncologists in 7 UK hospitals saw 149 eligible pts
• 27 patients saw different doctors at the 2nd visit

1) Pre test decision

Endocrine (E) n=88
Endocrine & Chemo (E+C) n=61

Low risk
N=46 (52%)

High Risk
N=42 (48%)

Low Risk
N=29 (48%)

High Risk
N=32 (52%)

E
46 (100%)

E+C
28 (67%)

E
14 (33%)

E+C
5 (17%)

E+C
29 (91%)

2) Test Results

Low risk
N=46 (52%)

High Risk
N=42 (48%)

Low Risk
N=29 (48%)

High Risk
N=32 (52%)

E
46 (100%)

E+C
28 (67%)

E
14 (33%)

E+C
5 (17%)

E+C
29 (91%)

Oncologists’ confidence:
• Pre & post test oncologists rated their agreement with statement “As the treating clinician, I am confident with the decision made today”
• Those strongly agreeing increased significantly from pre to post test (8% v 50%) p=0.002

Patients’ Anxiety:
• Significantly lower when treatment downgraded to E (p=0.045) and higher when upgraded to E + C (p=0.001)

Decisional conflict:
• Post test patients felt significantly less uncertain, more informed and effective about decisions made and overall decisional conflict was reduced (p≤0.025)

Conclusions:
• EndoPredict© testing generally improved the matching of therapy to risk, with the potential for better outcomes
• Test results increased oncologists’ confidence about treatment decisions
• Anxiety was lowered in patients whose treatment was downgraded
• Finally patients’ decisional conflict was significantly reduced

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