O-33 Is the difference between tamoxifen and anastrozole in adjuvant trials applicable for primary endocrine therapy of early operable primary breast cancer in the elderly?

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Background: The optimal management of predominantly estrogen receptor (ER) positive primary breast cancer (PBC) in the elderly remains controversial but use of tamoxifen as "primary endocrine therapy" is well established largely due to high proportion of elderly patients either refusing or being unfit for surgery. Yet unexplored in literature, we compare use of tamoxifen with anastrozole in this clinical setting.
Methods: Over 2 years period, elderly patients (>70 years) with UICC assessable ER+ operable PBC (<5 cm), had tamoxifen for ⩾6 months, unless they progressed prior. Anastrozole was used when there were contraindications to tamoxifen (eg, thromboembolic, gynecological risks).
Results: See the table.

Total = 93 patients	Anastrozole (n = 58)	Tamoxifen (n = 35)	p-value
Clinical Benefit (CR+PR+SD) at 6m	96.6% (56/58)	100% (35/35)	0.525
Objective Response (CR+PR) at 6m	43.1% (25/58)	31.4% (11/35)	0.282
Median Duration of response (months)	14.9 (6.0–57.0)	18.4 (7.0–39.2)	0.187
Median Time to progression (months)	15.2 (12.1–25.9)	16.5 (12.1–20.8)	0.304
Median ER H-score	240 (10 to 300)	260 (80 to 300)	0.398

CR = complete response; PR = partial response; SD = stable disease

At a median follow-up of 14.8 (6–57) months, 8 patients have progressed. Treatment was well tolerated in both groups and no patients withdrew due to side-effects.
Conclusion: In this observational non-randomised study, there was no significant difference in efficacy between tamoxifen and anastrozole, in contrast to results from adjuvant trials. Superiority of aromatase inhibitor was less apparent perhaps due to highly rich ER+ tumors (on semi-quantitative scoring of immunhistological assays) in this age-group.

O-34 Nuclear and cytoplasmic ER beta2 expression identifies distinct prognostic outcome in breast cancer patients

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Previous conflicting results regarding the prognostic significance of ER alpha in breast cancer may be explained by contribution of isoforms, of which 5 exist. Our aim was to elucidate the prognostic significance of ER beta2 by immunohistochemistry in a large cohort of breast carcinomas with long term follow up. Seven hundred and fifty seven cases, represented on tissue microarrays were stained with a specific, well-characterised ER beta2 antibody (Serotec) and scored either as continuous variables or using the Allred system. Nuclear and cytoplasmic staining was evaluated and correlated with histopathological characteristics, overall (OS) and disease free survival (DFS). Nuclear ER beta2 expression correlated significantly with OS ($P = 0.006$) and DFS ($P = 0.013$). ER beta2 also predicted response to endocrine therapy ($P = 0.036$), correlated positively with ER alpha, PR, AR, BRCA1 and inversely with metastasis and vascular invasion. Tumours co-expressing ER beta2 with ER alpha had better OS and DFS than ER alpha or ER beta2 alone. Cytoplasmic ERbeta2 expression, whether alone or in combination with nuclear staining, predicted significantly worse OS. Notably, patients with only cytoplasmic ER beta2 expression had the worst outcome of all ($P = 0.0014$). This data is currently being validated in an independent TMA dataset. Our data indicate that ER beta2 is a powerful prognostic indicator in breast cancer and also highlights for the first time, the importance of cytoplasmic as well as nuclear expression in dictating outcome. Measuring nuclear and cytoplasmic ER beta2 in clinical breast cancer could thus provide a more comprehensive picture of patient outcome, complementing ER alpha.

O-35 Pattern of oestrogen receptor (ER)-positivity in elderly breast cancer: comparison with younger age

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ER-positivity in breast cancer increases with age. Some clinical data show that radiotherapy can be safely avoided following lumpectomy in elderly patients taking tamoxifen; and that there is negligible benefit of adjuvant chemotherapy for patients approaching 70 years. Biological differences (with ER being an important one) may be contributory. This study aimed to analyse the pattern of ER-positivity in the elderly population.
Among 2,061 patients >70 years with operable primary breast cancer managed in a dedicated clinic from 1987, there were 1,557 tumours which had ER data available. Their pattern was compared with that in 2,674 tumours from younger (⩽70 years) counterparts treated during the same period. Histochemical (H)-score was measured using standard immunohistochemical assay by the same team of pathologists.
The patterns of ER-positivity are shown:

H-score	⩽35 years (n = 109)	>35–50 years (n = 903)	>50–70 years (n = 1,662)	>70 years (n = 1,557)
0	52.3%	29.5%	19.6%	18.2%
>0–50	5.5%	5.1%	3.2%	1.7%
>50–100	5.5%	12.5%	8.2%	4%
>100–200	31.2%	47.6%	46.2%	31.7%
>200–300	5.5%	5.3%	22.8%	44.4%
Total	100%	100%	100%	100%

In all age groups there is a marked biphasal distribution of ER-positivity, but in patients >70 years this is more marked, with a preponderance of highly ER-positive tumours, and a substantial minority being ER-negative (H = 0), with very few in intermediate groups. Endocrine therapy is clearly appropriate for the highly ER-positive majority, but management of those ER-negative ones is a challenge.

O-36 The potential role of ER beta in stromal regulation of mammary carcinogenesis

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Breast tumour proliferation, invasion and metastasis are influenced by the surrounding stroma and fibroblasts comprise the major constituent of this. The aim of this study was to establish if, and how, stromal mammary