moxifen treatment significantly improves disease-free survival. However, the improvements are small in absolute terms and the effects on breast cancer and overall mortality, and the long-term toxicity of AI treatment remain unclear. We undertook a meta-analysis of the studies of AIs to clarify the risks and benefits.

Results: AIs reduced the absolute risk of breast cancer recurrence by 2.5% (NNT 40; confidence interval 33–100; $p < 0.0001$), breast cancer death by 1.0% (NNT 110; 65–200; $p < 0.001$) and all-cause mortality by 0.7% (NNT 140; 70–700; $p < 0.05$) compared to tamoxifen. Gynaecological symptoms were fewer with AIs but osteoporosis, hypercholesterolaemia, arthralgia and diarrhoea were increased.

Interpretation: Using AIs instead of tamoxifen improves survival of post-menopausal women with ER-positive breast cancer over the first few years of treatment. However, the life years gained from AI use depend on whether the short-term benefits persist and are less for lower risk and older women. Cost/QALY appears high and switching from tamoxifen to aromatase inhibitors as first line treatment (which would cost about £70 million per year in the UK and about £1.5 billion per year worldwide) does not seem justified on current evidence. Uncertainty remains about the relative benefits and risks of aromatase inhibitors compared to tamoxifen, how the relative benefits vary over time and by background risk, whether a combination of tamoxifen and AIs is better than either treatment alone and on how long AI treatment should continue.

O-113. Aromatase inhibitors upfront: the switch of 2–5 years or extended adjuvant – how do we choose?

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Background: The aim of the study was to identify post-menopausal patients with ER+ disease who have relapsed while taking tamoxifen in the first 2–3 years and over 5 years to identify groups of patients who should be treated either with up front AIs between 2 and 5 years, switched after 2–3 years or who should have extended adjuvant hormonal treatment.

Patients: 670 post-menopausal women with ER+ disease who were given 5 years of adjuvant tamoxifen were identified. Of these 121 have relapsed. An analysis looking for risk factors for relapse <2.5 years, 2.5–5 years and 5 years was performed.

Results: Women >70 years of age, those with ER poor tumours and those which were grade 3 or had 4 or more nodes involved were at the highest risk of relapse in the first $2\frac{1}{2}$ years. These patients should be considered for immediate treatment with AIs. From 2–5 years the rate of relapse was still high for patients with ER poor turnouts, women with grade 3 tumours and multiple node involvement. The only group who did not have a significant relapse rate in the first 5 years was patients with grade 1 cancers. Beyond 5 years, only grade and number of lymph nodes involved predicted for recurrence, such that patients with grade 2 tumours had a higher rate of recurrence than grade 1 or grade 3, and risk increased as number of involved nodes increased.

Conclusion: The study identified groups of high risk post-menopausal women with ER+ breast cancers who should be considered for immediate AIs. Thereafter analysis of relapse indicates that all other patients should be switched to an AI after 2–3 years of tamoxifen. We have also identified which women benefit from extended adjuvant therapy.

O-114. Letrozole and Anastrozole: a pre-operative study of their effects on ER positive breast cancers in postmenopausal women

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Background: Letrozole appears to be a more potent inhibitor of oestrogen synthesis than anastrozole. Biological changes occur within 14 days of starting treatment and it is the aim of this study to investigate the changes within the first 14 days of treatment with anastrozole or letrozole.

Patients and Methods: 206 patients with 209 ER positive breast cancers (3 bilateral) were randomly allocated to receive either 2.5 mg of letrozole or 1 mg of anastrozole daily for 14 days prior to surgery. Proliferation ER, PR and Her2 were measured

Results: ER and PR: After letrozole and anastrozole treatment, there was a significant but small fall in ER (0.32, 0.20–0.44) $p < 0.0001$, and a much larger fall in PR 2.54 (2.20–2.89) $p < 0.0001$. More cases showed a reduction in PgR expression following letrozole than with anastrozole.

Proliferation: Both letrozole and anastrozole significantly reduced proliferation. Reductions in proliferation were higher in ER rich cancers, Allred 6–8 than Allred poor cancers 2–5 $p = 0.009$. There are no significant differences between the 2 drugs. Her2+ cancers had a higher initial proliferation than Her2− cancers $p < 0.003$. Both letrozole and anastrozole produced significant falls in proliferation with no quantitive differences between Her2+ and Her2− cancers. Change in PgR expression after treatment was also similar in Her2+ and Her2− groups.

Conclusion: 14 days of letrozole or anastrozole produced significant falls in proliferation and PR expression. Her2+ cancers had a higher rate of proliferation greater than Her2− cancers. Both letrozole and anastrozole produced a similar magnitude of reduction and proliferation in both Her2+ and Her2− cancers. Reduction in proliferation was greater in ER low tumours.

O-115. Is there an optimal duration of neoadjuvant letrozole therapy?

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Background: Randomised studies of neoadjuvant aromatase inhibitors have treated patients for 3–4 months. The aim of this review was to assess whether tumours continue to respond to neoadjuvant letrozole for periods longer than 3–4 months.

Patients and Methods: 142 postmenopausal women with large operable or locally advanced ER rich (ER Allred score