cers than to tamoxifen. This study set out to further investigate the relationship of Her 2 positivity and response to letrozole.

Patients and Methods: 172 postmenopausal women with large operable or locally advanced ER rich (ER Allred score 6 or more) breast cancers were enrolled into a prospective audit assessing response to 3 months of neoadjuvant letrozole 2.5mg per day. Her 2 status was assessed using the Hercept test with FISH for 2+ samples. Response was assessed clinically and by ultrasound. % in tumour volumes were calculated.

Results: Of the 172 patients, 18 tumours were Her 2 positive and 154 were Her 2 negative.

Reductions in tumour area and volume during letrozole treatment (volume calculated using the formula $d^3/6$).

	Her 2 negative		Her 2 positive	
	Median	95% CI	Median	95% CI
Clinical area	64%	57–68	64%	45–91
Clinical volume	78%	73–84	68	52–92
Ultrasound area	52%	48–60	47%	41–70
Ultrasound volume	67%	62–72	66%	37–83

None of the differences between Her 2 negative and Her 2 positive cancers were significant.

Conclusion: Neoadjuvant letrozole in this series of ER + breast cancers was equally effective in both Her 2 positive and negative tumours. It reduced tumour volume at 3 months by at least 66% in both groups. The efficacy of letrozole does not appear to be influenced by Her 2 status.

O-24. Response to further endocrine therapies following *de novo* or acquired resistance to first line endocrine therapy for advanced breast cancer

Agrawal A, Mustafa T, Gutteridge E, Robertson JFR, Cheung KL. *Nottingham City Hospital*

In a significant proportion of patients who have previously derived clinical benefit (CB) (objective response + stable disease for ≥6 months) from an endocrine therapy (ET), response to further ETs is seen, with subsequent development of acquired resistance (progressive disease after 6 months). For the remaining patients whose tumour has progressed within 6 months (*de novo* resistance), it is generally believed that the chance of achieving CB with further ETs is minimal.

According to our database of advanced breast cancer patients seen from 1994, 223 patients who had complete set of information and fulfilled the following criteria were studied: (1) oestrogen receptor positive tumour, (2) had initial treatment with ET; (2) disease assessable by UICC criteria; (3) on the respective ETs for ≥6 months unless they progressed prior.

About 70% of patients achieved CB and went onto subsequent ETs with further CB as shown below.

ET	1st line	2nd line	3rd line	4th line
N	223	68	13	5
N of CB (%)	159 (71.3)	43 (63.2)	6 (46.1)	1 (20.0)
Mean duration of response for patients with CB (months)	15.7+	16.4+	10.5	15.0
N still receiving treatment	50	14	0	0

Of these 223 patients, 64 (28.7%) had *de novo* resistance on first-line ET. Some of them were treated with further ETs with results shown below.

ET	2nd line	3rd line	4th line
N	17	9	4
N of CB (%)	5 (29.4)	2 (22.2)	0
Mean duration of response for patients with CB (months)	22.7+	14.0+	Not applicable
N still receiving treatment	1	1	0

The chance of further endocrine response continues to decrease with each line of therapy, yet CB is still seen with reasonable duration even with a fourth-line agent. In addition, further endocrine response, with long duration, can still be seen in a significant proportion of patients who have developed *de novo* resistance to first-line ET. The use of further ET should not be excluded under these circumstances. Detailed study of clinical and histopathological characteristics of these patients is underway to help selection.

O-25. High dose oestrogen (HDE) as an endocrine therapy option for advanced breast cancer (ABC)

Agrawal A, Robertson JFR, Cheung KL. *Nottingham City Hospital*

HDE was frequently used as an endocrine therapy prior to introduction of tamoxifen, which carries fewer side effects. With availability of more endocrine agents, further response to multiple agents is often seen. This has renewed interest in the use of HDE. We report our experience of using HDE (ethinylestradiol 1–2 mg daily) in ABC patients who progressed on available endocrine agents.

According to a database of ABC patients seen in our Unit from 1998, those who had complete set of information and fulfilled the following criteria were studied: (1) where endocrine therapy was deemed appropriate; (2) disease assessable by UICC criteria; (3) on ethinylestradiol for ≥6 months unless they came off treatment earlier due to adverse events or disease progression. Eleven patients with a mean age of 71 years (48–83 years) were identified. Majority ($N = 8$) had bony disease. They had ethinylestradiol as 4th ($N = 5$) to 7th ($N = 1$) line endocrine therapy.

One patient came off treatment early due to hepato-renal syndrome. Of the remaining 10 patients, clinical benefit (objective response + durable stable disease for ≥6 months) was seen in 3 of them (30%) with a mean duration of response of 17+ months. Ethinylestradiol is still continuing in 2 of these patients.

HDE remains a viable therapeutic strategy in patients who have run out of conventional endocrine therapy options. Although it tends to carry more side effects, they may not be comparable to those of chemotherapy.