



Neo-adjuvant Chemotherapy (NAC) can we predict PCR or poor response; a district general hospital experience and results

Blossom Lake, Donna Appleton, Abel Zachariah, Habib Khan, Kerry Flemming, Jennifer Neill, Laura Pettit
Shrewsbury and Telford Hospital, Shropshire, UK



Introduction

- Neo-adjuvant Chemotherapy is not suitable for all patients and treatment decision should be based on individual patient characteristics and tumour biology.
- Studies have shown that certain biological phenotypes dramatically respond to neo-adjuvant treatment and has led to widespread use with a survey of use among clinicians suggesting that 7-27% of new breast cancers may be being treated with neo-adjuvant chemotherapy.
- The aim of this study was to see if our experience at Shrewsbury & Telford NHS Trust (SATH) can help guide patient suitability.

Methods

- A 3 year prospective study of all breast cancer patients at Shrewsbury and Telford NHS Trust receiving Neo-adjuvant Chemotherapy from January 2015-July 2018.
- Data recorded included patient demographics, tumour subtypes, surgical treatment, and treatment response.



Figure 1 Patient having Neo-adjuvant Chemotherapy

Results

- 78 patients had NAC; 5 patients who had no surgery, 7 patients still having on-going treatment were excluded. Median patient age was 53 years (range 28-84), with median tumour size 4.1cm.
- Commonest reason for NAC was adverse biological factors.

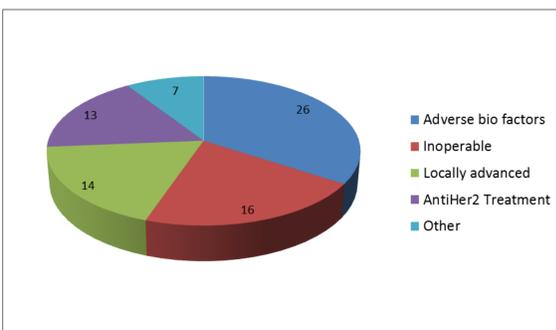


Figure 2 Reasons for Neo-Adjuvant Chemotherapy

- Change to surgical management occurred in 25 patients, 38%.

Results

- Overall PCR rate was 31 %, with 14 patients with no invasive or in situ residuals (ypT0ypN0), and 6 patients with no invasive tumour (ypTisypN0).

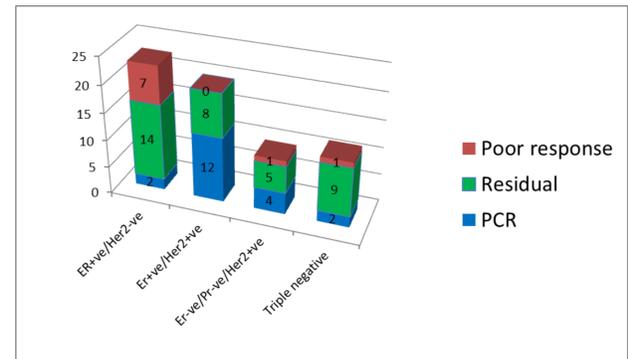


Figure 3 Pathological response

- All patients with PCR had ductal cancer and commonest subtype was ER+ve/Her2+ve, 60%. 9 patients (13%) had poor response; with commonest subgroup ER+ve/Her2-ve, 78%.

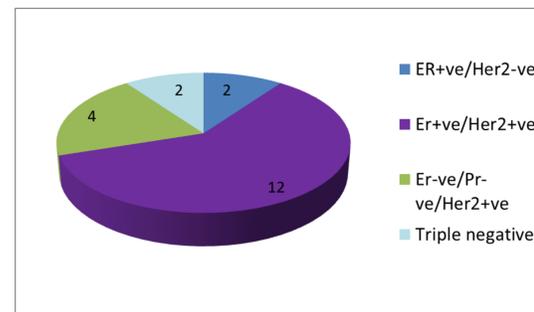


Figure 4 PCR by tumour subtype

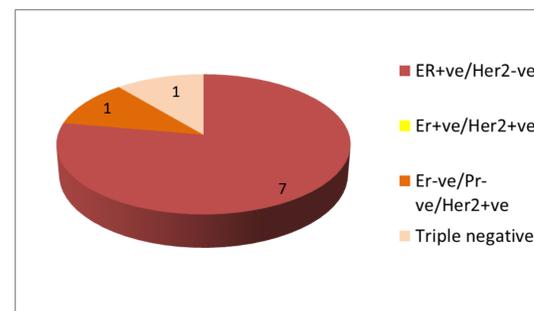


Figure 5 Poor response by tumour subtype

- Majority of patients had clinical and radiological response; this was not predictive of pathological response.

Conclusions

- Local experience in Shropshire suggests that tumour subgroup is the biggest predictor of pathological response
- Tumour biology is key in deciding patient suitability for Neo-Adjuvant Chemotherapy.

References

- Jayant. V et al Rethinking neo-adjuvant chemotherapy for breast cancer BMJ 2018; 360 :j5913
- Cain. H et al Neo-adjuvant Therapy in Early Breast Cancer: Treatment Considerations and Common Debates in Practice Clinical Oncology 2017: 29(10):642-652