Elston–Ellis grading has wide acceptance. Scores are 1–3 for each of Tubules Pleomorphism and Mitoses (TPM). These added (3–5, 6–6, 7–9) give 3 ('original') grades.

1. *Inter-unit consistency:*In ONCOPOOL only five recorded T, P and M on all. Inter-unit consistency was poor: ranges for G1 19–43%; G2 24–42 and G3 19–53.Cox analysis for survival showed P non-significant. Using only T and M gives five 'revised' grades: with ranges G1 4–14%, G2 16–21, G3 25–27, G4 18–21, G5 18–24.
2. *Re-evaluation of the Nottingham Prognostic Index (NPI) using 'revised' grade and adding lympho-vascular invasion (LVI)*Nottingham City Hospital data set, treated by primary operative therapy in 1990–1999 (n = 2238).

Effect on survival of revised grade, LN stage, size and LVI (Cox regression):

	Beta	p-Value
Size cm (0.5–5)	.2	.000
T (1–3)	.3	.003
M (1–3)	.45	.000
LN stage (1–3)	.6	.000
LVI (1–2)	.35	.001

This gives a formula for 'revised NPI': (LN stage 1–3 × 1.8) + (M 1–3 × 1.5) + (T 1–3) + (LVI 1–2). As in the original NPI the major contributions are made by LN stage and grade. Size contribution is larger than in original, the addition of LVI makes the smallest contribution.

Comparison in the same data set between survivals according to new and original NPI's showed that 17% of individuals moved down by one group, 21% moved up by one group and 0.4% by more than one, amending predicted individual 10 year survivals in 38% of individuals by up to 13%.

Conclusion: Revised grade gives much better consistency between units and can be applied to retrospective analyses.

The revised formula for NPI gives better prediction for the individual.

doi:10.1016/j.ejcsup.2010.06.072

O-72 REMODELING THE NOTTINGHAM PROGNOSTIC INDEX (NPI) FOR INDIVIDUAL PROGNOSIS

G. Ball, C. Lemetre, A.R. Green, I.O. Ellis, R. Blamey. *Nottingham Trent University, UK*

The Nottingham Prognostic Index (NPI) is a widely used tool for determining a prognostic outcome classification for women with breast cancer. The aim of this study is to remodel the NPI for individual prognosis at a particular time point.

The original formula NPI = grade + stage + 0.2* size was used to calculate a score that classified a case into one of six classes.

Recent work has progressed the NPI calculation to determine, using polynomial functions, the probability of survival to 10 years based on use of the NPI as a continuous variable.

Here we present further development of this work based on the Nottingham Case series (1990–1999, size < 5 cm, age <70, primary operable breast tumours, 2215 cases). Further analysis conducted has developed a number of functions that allow calculation of a probability of survival at any time point up to 15 years for a given NPI score. This modeling is presented in Fig. 1. Furthermore this function has been remodeled to

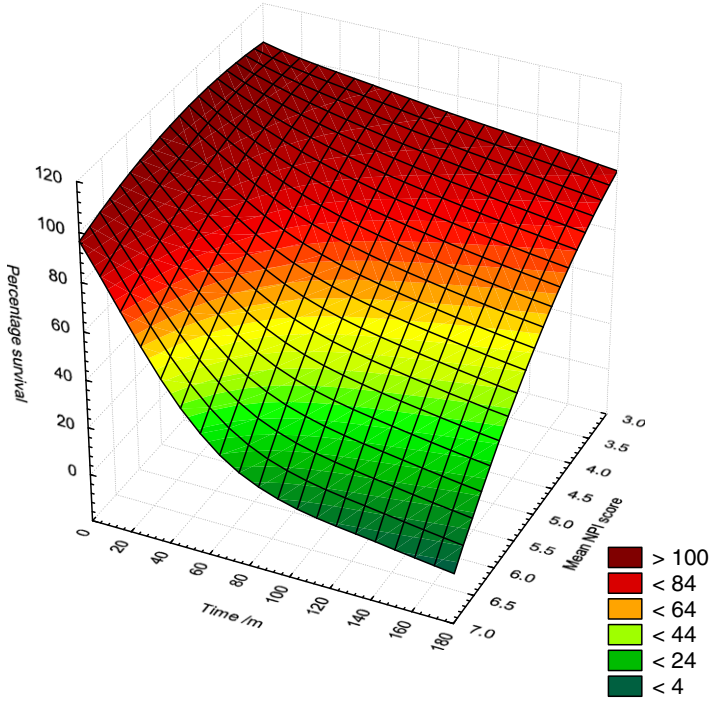

Fig. 1. Modeling of the NPI, relating probability of survival at a particular time to the calculated NPI value.

determine the time to reach median and quartile survival (25%, 50% and 75%, respectively).

doi:10.1016/j.ejcsup.2010.06.073

O-73 SENTINEL NODE BIOPSY MAY BE MORE SENSITIVE FOR DETECTING POSITIVE NODES THAN AXILLARY NODE SAMPLE: RESULTS FROM A RETROSPECTIVE ANALYSIS

E.J. Macaskill [a], K. Brauer [b], C.A. Purdie [c], D.C. Brown [a]. [a] *Department of Breast Surgery, Ninewells Hospital, Dundee, UK.* [b] *Department of Breast Radiology, Ninewells Hospital, Dundee, UK.* [c] *Department of Breast Pathology, Ninewells Hospital, Dundee, UK*

Background: While there have been a number of studies comparing axillary clearance with limited axillary surgery, there is little data available comparing axillary sample (ANS) with sentinel node biopsy (SNB). We report results of a retrospective audit of ANS and SNB procedures performed in a single unit on two sites over a 2 year period.

Results: In total 224 patients underwent limited axillary surgery (ANS $n = 142$ (63%); SNB $n = 82$ (36%)) from January 2008 to January 2010. Sentinel node biopsy was performed using a combination technique with blue dye and radioisotope injections.

The results shown in Table 1 show a significantly greater number of nodes taken with ANS compared with SNB. A significantly higher proportion of patients having SNB had a positive node (22% vs. 9.9%) despite similar baseline tumour characteristics (tumour size, grade and NPI) in SNB and ANS groups, and a greater number of positive nodes following ANC in the ANS group.

These results suggest that SNB is more accurate at detecting positive nodes even in low volume axillary disease. Data from 5 years (approx 500 patients) will be presented.

Table 1

	ANS $n = 142$	SNB $n = 82$	p-Value
Median nodes taken n (range)	4 (1–10)	2 (1–6)	<0.0001
Positive node(s) n of cases (%)	14 (9.9)	18 (22.0)	0.0226
Further positive nodes on ANC n of cases (%)	4 (33.3)	4 (22.2)	0.0547
Total number of positive nodes after ANC mean (range)	2.7 (1–6)	1.3 (1–2)	0.0028

doi:10.1016/j.ejcsup.2010.06.074

O-74 HOW OFTEN DOES A POSITIVE SENTINEL LYMPH NODE BIOPSY PROMPT AN ISOLATED DELAYED AXILLARY LYMPH NODE DISSECTION?

J.R. Benson, G.C. Wishart, P. Forouhi, E. Provenzano. *Cambridge Breast Unit, Addenbrooke's Hospital, Cambridge, UK*

Methods for intra-operative node assessment can avoid delayed axillary lymph node dissection (ALND) in a proportion of sentinel lymph node biopsy (SLNB) patients. Both frozen section and imprint cytology are inconsistent and of variable sensitivity compared to paraffin embedded H&E sections and have not yet been surpassed by molecular assays. Modern approaches to axillary management can contribute to reduction in absolute numbers of isolated completion ALND cases without intra-operative assessment.

A retrospective analysis was undertaken of 443 patients eligible for SLNB with clinically node negative tumours <5 cm. Patients having SLNB before neoadjuvant therapy (27) or immediate breast reconstruction (IBR) (44) were excluded from further analysis together with 15 patients undergoing single stage ALND (level I/II) due to age or co-morbidity. Most of the remaining 357 patients had an axillary ultrasound examination (301/357) with 49 proceeding directly to ALND based on positive nodal core biopsy (40), suspicious nodes with (6) or without (3) a negative biopsy. Amongst 308 patients undergoing SLNB, 73 were node positive (23%) and required completion ALND. Just over half these had an isolated delayed ALND (40), whilst 33 patients had ALND with an additional surgical procedure (re-excision, mastectomy with or without IBR). The recall rate for delayed ALND alone was <10% (40/443).

Intra-operative node assessment may be more difficult to justify for all SLNB patients in the context of contemporary surgical practices which either deselect patients for SLNB or enable any completion ALND to be performed as a component of definitive breast surgery.

doi:10.1016/j.ejcsup.2010.06.075

O-75 FINE NEEDLE ASPIRATION CYTOLOGY IS A VALUABLE ADJUNCT TO AXILLARY ULTRASOUND IN THE PREOPERATIVE STAGING OF EARLY BREAST CANCER

Morna MacNeill, Isobel Arnott, Jeremy Thomas. *Edinburgh Breast Unit, Edinburgh, UK*

Aims: To determine the predictive values of axillary fine needle aspiration (FNA) cytology and ultrasound (US) and tumour size and the influence of histological grade in the preoperative axillary staging of early breast cancer.

Patients and methods: 314 patients:119 patients had suspicious US investigated by FNA; 195 patients had normal US not investigated further preoperatively. Review of case records and discrepant cytology.

Results: Positive and negative predictive values (PPV & NPV) for US status and tumour size (*T* stage are shown in Table 1. Of 195 patients with negative axillary US 37 (19%) had metastatic nodal