as described previously had a rCR in their axilla (44%), and 9 patients (53%) had ≥1 positive axillary nodes on MRI following NAC. Discrepancy between radiological response and pathological response was seen in 26 patients (57%).

		Pathological Response (No. positive axillary nodes)			
		0 (pCR)	1-2	3+	Total
MRI Radiological Response (No. positive axillary nodes)	0 (rCR)	8	4	3	15
	1-2	5	3	6	14
	3+	4	4	8	16
	Total	17	11	17	45

Conclusion: There is a clinically significant discrepancy between rCR and pCR in the axilla. This highlights the fact that MRI cannot be relied upon for accurate axillary response to NAC; surgical biopsy and histopathological assessment remains necessary in rCR patients.

P008. IMPACT OF SENTINEL LYMPH NODE BIOPSY ON PHYSICAL FUNCTION OF THE UPPER LIMB – A PROSPECTIVE STUDY IN PATIENTS WITH EARLY BREAST CANCER

Mihir Chandarana[1], Yanyu Tan[2], Sankaran Narayanan[3], Sekhar Marla[3], Sadaf Jafferbhoy[4], Robert Kirby[3], Soni Soumian[3]. [1] *Forth Valley Royal Hospital, Larbert, United Kingdom;* [2] *Queen Elizabeth Hospital, Birmingham, United Kingdom;* [3] *University Hospitals of North Midlands, Stoke-on-Trent, United Kingdom;* [4] *Manchester University NHS Foundation Trust, Manchester, United Kingdom*

Introduction: Sentinel lymph node biopsy (SLNB) is the standard of care for axillary staging in breast cancer for clinically node negative patients. There have been some studies looking at upper limb morbidity after SLNB. We conducted a prospective study based on patient-reported functional outcomes after SLNB for early breast cancer.
Methods: Patients operated for a wide local excision and SLNB from February to November 2017 were included in the study. Patients were required to fill a validated Quick Dash (QD) questionnaire pre-operatively, at 2-weeks and at 3-months after SLNB procedure. The QD scores were calculated (Range 0-100) with higher score indicating poorer function. QD scores before and after surgery were compared.
Results: 120 patients were included in the analysis. Ninety-nine patients met all the inclusion criteria. The mean pre-operative QD score was 8.45. This increased to 16.05 at 2-weeks and reduced to 13.35 at 3 months. In a subset of patients without pre-operative upper limb dysfunction [QD score<10 (n = 75)], the mean scores were 1.82, 10.53 and 6.70 pre-operatively, 2-weeks and 3-months respectively. Thus, there was an increase in the scores immediately after the procedure, which returned closer to baseline at 3 months. The mean scores in patients with pre-operative upper limb dysfunction (QD score>10) increased after surgery and remained high at 3 months.
Conclusion: The Quick Dash scores suggest that there is a temporary deterioration in upper limb function after SLNB in patients with normal shoulder function. Assessment of 12-month scores would be useful to evaluate long-term outcomes.

P009. DOES TOTAL TUMOUR LOAD IN SENTINEL LYMPH NODE BIOPSY ASSESSED BY OSNA PREDICT FURTHER AXILLARY NODE DISEASE? CAN IT STRATIFY WHICH PATIENTS MAY BENEFIT FROM AXILLARY CLEARANCE?

Uma Sridharan, Adrian McKenna, Julia Henderson, Mysore Chandrashekar, Ian Quayle, Geraldine Mitchell, Chris Holcombe. *Royal Liverpool University Hospital, Liverpool, United Kingdom*

Introduction: There is a lack of consensus regarding the optimum axillary management of early breast cancer, especially in women with only one or two node involvement. More than 50% of patients who proceed to axillary clearance following sentinel lymph node biopsy have no further nodal involvement. One-Step Nucleic Acid amplification (OSNA) is a molecular assay of cytokeratin-19 (CK 19) mRNA which can be utilised intra-operatively for detection of lymph node metastases in breast carcinoma. Our aim is to identify a correlation of CK-19 total tumour load (TTL) and further axillary disease to aid intra-operative decision making regarding complete axillary dissection.
Methods: A retrospective single centre analysis of 1131 consecutive patients (Nov 2012 to Dec 2016) with invasive breast carcinoma who underwent intra-operative OSNA assessment was performed. Patient demographics, surgical and histopathological data were analysed.
Results: 490 (43.3%) patients had nodal positivity when assessed by OSNA. 302 (26.7%) patients had micrometastastic disease and 188 (16.6%) patients had macrometastastic disease. In the macrometastatic group, 138 (73.1%) of patients proceeded to axillary node clearance. Only 59 (42.8%) patients out of this cohort had further nodal involvement. Utilising a CK 19 copy number of 20,000 as a cut-off appeared to predict further axillary disease.

Total CK-19 copy No.	No. of patients	Axillary node clearance	Further LN involved
<20000	39	39	5 (12.8%)
>20000	99	99	54 (54.5%)

Conclusion: A CK-19 total copy number of >20,000 may help predict the likelihood of further axillary disease, aid intra-operative decision making, and avoid unnecessary further axillary surgery.

P010. A PROSPECTIVE COMPARATIVE STUDY OF SENTINEL LYMPH NODE BIOPSY WITH INDO-CYANINE GREEN (ICG) FLORESCENCE TECHNIQUE VERSUS DUAL DYE TECHNIQUE FOR EARLY BREAST CANCER - GOING BEYOND THE HORIZON IN INDIA

Shaziya Hassan Ali, S.P. Somashekhar, Shabber S. Zaveri, C. Rohit Kumar. *Manipal Comprehensive Cancer Center, Bangalore, India*

Introduction: The objective of the present study was to assess the performance of sentinel lymph node (SLN) biopsy using indocyanine green (ICG) fluorescence method compared with that using the conventional method in detection of SLN.
Methods: 60 patients diagnosed with early breast cancer in a tertiary cancer center (South India) underwent the SLNB procedure using technetium 99m radio colloid (R), methylene blue dye (MB), and ICG. All SLNs removed during surgery were labelled as hot, blue or/and fluorescent and sent for pathological examination. The detection rate of SLNs and positive SLNs, and the number of SLNs of ICG, MB+ R, ICG + MB, ICG + R were compared. Injection safety of ICG and MB was evaluated.
Results: SLN was identified in all 60 cases. Total SLNs removed was 145 (Mean=2). Identification rate with dual dye technique was 95%, blue dye alone 93.6%, radioisotope alone 96.8% whereas ICG alone was 100%. Both dual dye & ICG identified all the positive nodes (46.6%). None had any local or systemic reaction with ICG, 3 patients with blue dye had tattooing & skin staining.
Conclusions: ICG is as effective as the dual dye for SLNB. In addition, as a near-infrared dye, it has the advantages of real-time visualization, lower cost, and wider availability, since no radioactive material needs to be handled. It can be a boon for developing countries & second tier centers of developed countries where there is limited access to a nuclear medicine department facility & the cost involved in its establishment.

P011. AXILLAR MANAGEMENT AFTER NEO-ADJUVANT CHEMOTHERAPY: EDINBURGH BREAST UNIT 2016-17 PERIOD

Sarah Moin[1], Teresa Fernandez[2], Christine Doods[3], Oliver Young[2]. [1] *Medical School, Edinburgh, United Kingdom;* [2] *NHS Lothian, WGH, Edinburgh Breast Unit, Edinburgh, United Kingdom;* [3] *NHS Lothian, SCAN group, Edinburgh, United Kingdom*

Introduction: Recently neo-adjuvant chemotherapy (NCAT) has gained therapeutic importance for downsizing breast tumours but also for de-escalating axillary treatment. It is early days for this approach as there is

not yet proven evidence regarding oncological impact of conservative management of the axilla following NCAT.
Aim: To analyse current practice regarding axillary management post NCAT in a single unit during 2016-17.
Method: Retrospective observational study of breast cancer patients treated with NCAT during 2016-17 in a single unit. The primary outcome was to analyse our surgical management of the axilla post NCAT
Results: Out of 177 patients treated with NCAT, 130 had proved positive axilla (posA), 74% at diagnosis whilst 47 (26%) were negative. In the latter, 45 patients underwent an initial sentinel node biopsy (SNB) post NCAT from whom 5 patients needed further Axillary Clearance (ANC). Average nodes retrieved was 4.4 (1-11) using dual technique.
In the posA group, 74 (56%) patients had an initial SNB from whom 20 (15%) required further ANC. The other 52 (40%), had just primary ANC. Therefore, the number of patients who avoided ANC in this group was 54 (42%). The distribution of triple negatives and Her2 positives patients in our series was 49 (28%) and 67 (38%) respectively.
Conclusions: Ninety-four (54%) patients out of the total 177 were managed with SNB as a primary axillary surgical treatment post NACT, whereas 54 (42%) avoided ANC. That result is encouraging to engage in more controlled studies to support this conservative approach in selected patients.

P012. THE ROLE OF SENTINEL LYMPH NODE BIOPSY IN PLANNING ADJUVANT CHEMOTHERAPY FOR ELDERLY WOMEN WITH LOW RISK BREAST CANCER

Vivienne Blackhall, Martina Bugelli, Nick Abbott, Russell Mullen. *Highland Breast Centre, NHS Highland, Inverness, United Kingdom*

Background: Sentinel lymph node biopsy (SLNB) guides the delivery of adjuvant chemotherapy in breast cancer. Elderly patients (≥70 years) may not be candidates for chemotherapy due to poor performance status. Additionally, omitting SLNB in elderly patients with early breast cancer may not affect survival. In patients who are unlikely to receive chemotherapy, SLNB may therefore be unnecessary.
Aims: To determine whether SLNB in elderly patients (≥70 years old) with low-risk breast cancer informs adjuvant chemotherapy.
Methods: This was a retrospective review of a prospectively maintained database from 2013-2017 at Raigmore Hospital, Inverness. Patients with low-risk unilateral breast cancers undergoing SLNB were included. Basic demographics were recorded. Fisher's exact test compared the difference between the proportion of women with a positive SLNB offered chemotherapy in the younger (<70 years) and older (≥ 70 years) groups.
Results: The study included 492 patients. Median age was 63 years; 137 patients (27.8%) were aged ≥70 years. Eighty-nine patients had a positive SLNB; 73 (82.0%) were < 70 years old and 16 (18.0%) were ≥ 70. Of elderly patients with a positive sentinel node, only 5 were offered chemotherapy (31.2%). In the younger group, most women were offered chemotherapy (89%). There was a statistically significant difference in the proportion of node positive women receiving chemotherapy in the two age defined cohorts ($p<0.0001$).
Conclusions: Elderly women with node positive, low-risk breast cancers are less likely to be offered chemotherapy when compared with younger patients, suggesting that the use of SLNB in elderly patients could be rationalised.

P013. MAGNETIC SEEDS: AN ATTRACTIVE LOCALISATION OPTION FOR THE MANAGEMENT OF AXILLARY NODE POSITIVE BREAST CANCER

Victoria Sinnett[1], Katherine Krupa[1], Robin Wilson[1], Aikaterini Micha[1], Amy Godden[1], Peter Barry[1], Steven Allen[2], Fiona MacNeill[2], Jennifer Rusby[1]. [1] *The Royal Marsden NHS Foundation Trust, Sutton, United Kingdom;* [2] *The Royal Marsden NHS Foundation Trust, London, United Kingdom*

Introduction: There are 2 indications for accurate removal of a previously identified, involved lymph node: 1) after neoadjuvant chemotherapy (NACT) to ensure that the index node is assessed (targeted axillary dissection), and 2) for women with 1 or 2 abnormal nodes on imaging who may be eligible for sentinel node biopsy (SLNB) as per POSNOC. Dual localisation has an unacceptable false negative rate in the former and marking of the index node is advised. Although a node can be marked prior to NACT, finding that node poses a challenge.
Magnetic seed localisation (eg with Magseed) allows for accurate excision of impalpable breast lesions and may also solve the issue of node identification. We aimed to assess the feasibility of Magseed insertion into axillary nodes and accuracy of surgical removal.
Methods: A prospective pilot study of 9 patients was undertaken between August and November 2018. Data collected included details of radiology and surgical procedures, clinician satisfaction and pathological outcome.
Results: Radiologists reported that the Magseed was easy to insert under ultrasound guidance into the target node (mode 4 out of 5). Eight patients have undergone surgery, 3 after NACT, all with successful removal of the seed and the surgeons were also satisfied (mode 4 out of 5). In all cases the relevant node was identified.
Conclusions: Magseed insertion into malignant axillary lymph nodes is feasible and identification of the Magseed node at surgery straightforward. Further evaluation is required to establish utility in facilitating axillary conservation surgery in node positive breast cancer.

P014. COMPARISON OF AXILLARY NODE SAMPLING AND SENTINEL LYMPH NODE BIOPSY BEFORE AND AFTER THE INTRODUCTION OF SENTIMAG® MAGNETIC TRACER TECHNOLOGY

Bahar Mirshekar Syahkal[1], Mina Girgis[1], Edward Fletcher[1], Mamie Liu[2], Balendra Kumar[1], Eamonn Coveney[1], Jane Aitken[1]. [1] *West Suffolk Hospital, Bury St Edmunds, United Kingdom;* [2] *Broomfield Hospital, Chelmsford, United Kingdom*

Introduction: Sentinel lymph node biopsy (SLNB) is the accepted standard for assessing the axilla in breast cancer patients with clinically node-negative disease. In the absence of a dual technique to identify sentinel nodes, four-node axillary sampling (ANS) should be performed, however increased nodal excision is associated with increased morbidity. In April 2017 our unit changed its practice from blue dye-assisted ANS to SLNB using blue dye and Sentimag®. The aim of this study was to evaluate the effects of this change following completion of a six month learning period.
Methods: A service evaluation project was registered with our Trust to perform a retrospective case notes analysis of all breast cancer patients undergoing axillary staging surgery for one year pre-Sentimag® (01/04/2016 to 31/03/2017) and post-Sentimag® (01/10/2017 to 30/09/2018).
Results: 347 axillary staging procedures were performed in total (Table 1). The commonest reasons for not using Sentimag® were previous surgery (13/161 patients) and poor renal function (6/161 patients). 7/134 (5%) SLNB procedures failed (no tracer detected). Significantly fewer lymph nodes were removed using SLNB than ANS (median 2 vs 3; Mann Whitney $p<0.0001$); there was no significant difference in the number of axillary node clearances (15/134 vs 21/213; Fisher's exact test $p=0.72$).
Conclusions: SLNB using blue dye and Sentimag® instead of ANS is appropriate for the majority of patients requiring axillary staging and may reduce axillary morbidity by reducing the number of lymph nodes removed. Sentimag® provides an excellent non-radioactive alternative for SLNB.

Table 1
Axillary staging methods used per- and post-Sentimag.

	SLNB:Blue dye AND Sentimag®	ANS:Blue dye	ANS:Sentimag®	ANS:No tracer	Total
Pre-Sentimag®	-	185 (99%)	–	1 (1%)	186
Post-Sentimag®	134 (83%)	23 (14%)	1 (1%)	3 (2%)	161
Total	134	208	1	4	347

P015. OUTCOMES FOLLOWING NEOADJUVANT CHEMOTHERAPY FOR BREAST CANCER: PATHOLOGICAL RESPONSE IN THE AXILLA

Ross McLean[1], Henry Cain[2], Alexander Frost-Younger[1], Petros Amorginos[1], Mark Verrill[3], Nicola Cresti[3], Sunil Amonkar[1], Andrew Pieri[2]. [1] *Queen Elizabeth Hospital, Gateshead, United Kingdom;* [2] *Royal Victoria Infirmary, Newcastle-Upon-Tyne, United Kingdom;* [3] *Northern Centre for Cancer Care, Newcastle-Upon-Tyne, United Kingdom*

Introduction: Neoadjuvant chemotherapy (NAC) is used effectively in the management of breast cancer, and can downstage axillary disease. This