assumed for treatment with an AI after therapy discontinuation. Costs (2005 UK£) of breast cancer care were obtained from a primary costing study in Scotland; treatment costs for adverse events and health-state utilities (QALY weights) were obtained from published studies. Costs and QALYs were estimated over the remaining lifetime of a cohort of HR+ women aged 61 years, discounted at 3.5% annually.
Results: The incremental cost per QALY gained of LET vs TAM is £10,379 (95% CI £6,654−24,369), of ANA vs TAM is £11,428 (95% CI £6,131−53,125), and of sequential TAM and EXE vs TAM alone is £11,020 (95% CI £6,292−53,305).
Conclusion: Compared with 5 years of TAM, adjuvant treatment of postmenopausal HR+ women with LET or ANA for 5 years, or 2 years TAM followed by EXE for 3 years, is a cost-effective use of UK NHS resources. The mean results indicate that up-front use of LET is a more cost-effective use of NHS resources than ANA upfront or switching to EXE after 2−3 years of TAM, though the confidence intervals overlap.

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Breast conservation treatment with vs. without axillary lymph node dissection for clinical T1/2N0M0 breast cancer

S. Kariya[1], H. Ue[1], K. Tsuduki[1], Y. Murata[1], S. Itoh[1], K. Kubota[1], N. Hamada[1], Y. Tanaka[2], A. Nishioka[1], Y. Ogawa[1]. *[1]Kochi Medical School, Department of Diagnostic Radiology & Radiation Oncology, Nankoku, Japan; [2]Kochi Medical School, Department of Surgery, Nankoku, Japan*

Background: The number of pathological axillary lymph node (ALN) metastases dissected during surgery is the most reliable prognostic factor and key indicator in determining post-surgical treatment. For these reasons, axillary lymph node dissection (ALND) has become popular in breast cancer treatment; however, ALND is associated with complications such as seroma, elevation disturbance, paresthesia, and edema of the upper arm. The aim of the present study is to examine the effectiveness of breast conservation treatment (BCT) without ALND for clinical T1/T2N0M0 breast cancer.
Materials and Methods: We enrolled 195 breast cancer patients clinically diagnosed as T1/T2N0M0 between July 1989 and March 2002 (age range, 21–84 years; median, 49 years). The follow-up phase ranged from 1 year 6 months to 17 years 5 months (median, 10 years 4 months). We provided BCT without ALND for 105 patients who agreed to receive this treatment and BCT with ALND for the others. The criteria for negative ALN metastasis was minor axis of the lymph node less than 5 mm on CT images and fat tissue in the hilum of the ALN that did not disappear on ultrasound images. In cases where hormone receptor expression was positive or unknown, nonsteroidal antiestrogen was administered for 5 years. In cases of T1c or T2 under 70 years old, neoadjuvant and/or adjuvant CAF therapy (C: cyclophosphamide, A: pirarubicin, F: 5-fluorouracil) was administered. After surgery, patients without ALND received tangential irradiation to both the breast and axillary regions, while patients with ALND received irradiation only to the breast region.
Results: Among 90 patients who underwent surgery with ALND, 78 patients had pathologically negative ALN metastasis (true-negative rate, 86.7%); none of these patients had more than four ALNS metastases. Five- and 10-year cause-specific survival was 100% and 98.8%, respectively, for BCT without ALND, and 100% and 98.7%, respectively, for BCT with ALND; there was no significant difference between the two groups. Five- and 10-year disease-free survival was 97.9% and 93.8%, respectively, for BCT without ALND, and 98.8% and 94.8%, respectively, for BCT with ALND; there was no significant difference between the two groups.
Conclusions: These results indicate that ALND is omissible in the case of BCT for clinical T1/T2N0M0 breast cancer treated by a combination of hormone therapy, neoadjuvant/adjuvant ACF therapy, and tangential irradiation to both the breast and axilla.

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Sequential taxane- and anthracycline-containing neoadjuvant regimens: the sequential order impact

A. Thierry-Vuillemin[1], A. Llombart[2], A. Ruiz[2], L. Chaigneau[3], T. Nguyen[1], P. Montcuquet[4], M.P. Algros[5], C. Villanueva[1], J.L. Sautiere[6], X. Pivot[1]. *[1]CHU de Besançon – Hôpital Jean Minjoz, Medical Oncology, Besançon, France; [2]Instituto Valenciano de Oncologia, Medical Oncology, Valencia, Spain; [3]Polyclinic Franche-Comte, Medical Oncology, Besancon, France; [4]Capio Clinic St Vincent, Medical Oncology, Besancon, France; [5]CHU de Besancon – Jean Minjoz, Histopathology, Besancon, France; [6]CHU de Besancon – Jean Minjoz, Gynecology, Besancon, France*

Background: Since NSABPB27 trial, one can consider as standard neoadjuvant treatment the sequence of 4 cycles of anthracycline based chemotherapy followed by 4 cycles of docetaxel. Based on the belief that the sequence order between anthracycline and taxane might be of interest. Oncologists started with taxane containing sequence when others began with anthracycline containing sequence. The present retrospective study assessed the impact of the sequence order.
Methods: One hundred and six patients with breast cancer were treated by neoadjuvant chemotherapy in 2 Spanish and 3 French oncologic centers between January 01, 2003 and August 31, 2006. The neoadjuvant chemotherapy regimens included EC (100 mg/m^2 of Epirubicin + 500 mg/m^2 of cyclophosphamide), AC (60 mg/m^2 of doxorubicin + 500 mg/m^2 of cyclophosphamide) or FEC (500 mg/m^2 of 5-fluorouracil + 100 mg/m^2 of Epirubicin + 500 mg/m^2 of cyclophosphamide) and docetaxel (100 mg/m^2). This study compared 52 patients treated by 4 cycles of docetaxel followed by 4 cycles of anthracycline-based chemotherapy (cohort A) versus 54 patients treated by 4 cycles of anthracycline-based chemotherapy followed by 4 cycles of docetaxel (cohort B).
Results: Dose intensities in the two cohorts were similar and higher than 95%. No statistically significant differences were observed between cohort A and cohort B in terms of clinical complete responses (CCR), conservative surgeries, histological responses (based on Sataloff TA criteria): 63%, 62% and 29% versus 47%, 53% and 29%, respectively. Nonetheless, the toxicity profile significantly differed according to the sequence order: Severe neurotoxicity ($\geqslant$grade 2) was higher in patients treated in cohort A (13% versus 2%; $p = 0.03$), but all patients recovered within 3 months. Anemias ($\geqslant$ grade 1) were higher in cohort B (49% versus 83%; $p = 0.0002$) and related erythropoietin administration was increased in cohort B (17% vs 10%; $p = 0.005$). Of note, the sequence of chemotherapy did not significantly influence other treatment-related toxicities.
Conclusion: The present study failed to identify an impact of the sequence of taxane administration on neoadjuvant chemotherapy efficacy. Nevertheless, starting neoadjuvant chemotherapy by taxane prevents the occurrence of severe anemia and erythropoietin prescription. These findings might allow a selection of the sequence order based on the toxicity profile.

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Impact of CT-based target delineation on the location of the internal mammary and median supraclavicular (IM-MS) field

C. Weltens, K. Erven, S. Petillion, E. Van Limbergen, F. Van den Heuvel, W. Van den Bogaert. *U.Z. Gasthuisberg, Radiotherapy, Leuven, Belgium*

Background: Radiotherapy of the internal mammary and medial supraclavicular (IM-MS) lymph nodes is in most centres performed with a standard anterior mixed photon (6MV) and electron beam (12 MeV). The position of the field is based on surface anatomy and the dose is prescribed to a point. In this study we examined the impact of detailed CT-based target delineation on the conventional field borders and dose specification.
Materials and Methods: The CTV IM and MS was delineated on the CT-scans of forty conventionally simulated breast cancer patients (20 left and 20 right), following fixed guidelines. The depth and lateral position of the CTV IM and MS was measured on the central slice (IM-part), where the prescription point is located. Furthermore the deepest and most lateral position of the CTV (MS-part) was determined. Taken into account the requirements of the EORTC protocol 22922 (ipsilateral border of the IM part of the field at 5 cm from the midline), the CTV IM is outside the radiation field if its ipsilateral position is more than 3.8 cm from the midline (0.5 cm PTV margin and 0.7 cm penumbra).
Results: The mean AP diameter was 20.8 cm ($\pm$2.6). The mean depth and laterality of CTV IM on the central slice was respectively 2.7 cm ($\pm$0.8) and 3.9 cm ($\pm$0.4). In 52.5% of patients the lateral position of CTV IM is more than 3.8 cm from the midline. The mean depth and laterality of the CTV MS was 5.0 cm ($\pm$0.9) and 5.3 cm ($\pm$0.5). In 87.5% and 45% of patients, the depth of the CTV MS is more then respectively 4 cm and 5 cm.
Conclusions: The conventionally simulated direct anterior IM-MS field does not cover the target volume adequately in most patients. Firstly dose prescription to a point on the central slice of the IM-MS field is not adequate and results in underdosage of the MS-part since the deeper location of the lymph nodes cranially. Secondly the ipsilateral field border of the IM-part has to be shifted to the ipsilateral side in 52.5% of patients when full CT-data are taken into account. However, this is mostly not feasible when breast tangential fields have to match the IM-MS field, because it results in an ipsilateral shift of the matchline and as a consequence the cold triangle can be located in the CTV breast. Therefore not only field borders and dose prescription but also field set-up should be adapted to the CT-based target localisation and patient anatomy.