446 Poster

Docetaxel, Carboplatin and Trastuzumab (TCH) as Neoadjuvant (neoadj) Therapy in Patients (pts) with HER2-positive (HER2+) Operable Breast Cancer (BrCa)

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Background: In randomised trials the addition of trastuzumab (H) to neoadj chemotherapy (CTx) produced higher rates of pathological complete responses (pCR) compared to CTx alone in operable HER2+ BrCa. In the adjuvant setting the BCIRG006 trial showed that the non-anthracycline (A) containing regimen TCH was equivalent to an A+H containing regimen with substantially less cardiac toxicity. In preparation for a randomised trial comparing neoadj TCH to TC+/− lapatinib (L) +/− H we analyzed the efficacy of TCH in producing pCR in pts not treated in clinical trials.

Methods: We retrospectively reviewed all pts with operable HER2+ BrCa who received neoadj TCH at our Institutions. The TCH regimen consisted of T 75 mg/m^2, C AUC5 or 6 and H 8 mg/kg loading dose followed by 6 mg/kg maintenance dose administered every 3 weeks by 6 cycles. 12 months of H were planned for all pts. pCR was defined as no evidence of invasive carcinoma in either breast and axillary lymph nodes (LNs). Post-Sx Rx [radiotherapy (RT) and medical Rx] were given as per institutional practice.

Results: We identified 42 pts treated from June 2006 to September 2011. Median age was 50 years (range 35−81). All pts but one had invasive ductal histology. All tumours were HER2+ by immunohistochemistry and/or fluorescent in-situ hybridisation. Other pts characteristics were: G3/G2/uk 29 (69%)/11 (26%)/2 (5%), oestrogen receptor (ER) pos 22 (52%), ER and progesteron receptor (PgR) neg 17 (40%), ER uk 3 (8%). Axillary LNs status following fine-needle aspiration at baseline was: pos 31 (74%), neg 6(14%), uk 5(12%). Thirty-six pts (86%) received 6 cycles of TCH, 6 pts received <6 cycles of TCH due to: treatment toxicity (3), lack of efficacy (1), other reasons (2). TCH toxicity was in line with data from previous trials. All pts but one (98%) had a clinical response to neoadj TCH and underwent Sx [(breast-conserving: 15 (36%), mastectomy: 26 (62%)], 1 pt did not undergo Sx due to poor response and had RT. The pCR rate was 43% (18 pts) in the entire population. In the ER and PgR neg population pCR rate was 59%. At median follow up of 26 months (range 3−56) 36(86%) pts are disease-free, 5(12%) pts relapsed after Sx (non-pCR: 4, pCR:1).

Conclusions: In this series of unselected operable HER2+ BrCa the non-A containing TCH regimen produced a high pCR rate, especially in the ER and PgR neg subgroup. Accrual to the ICORG TCH v TCHL v TCL trial, a study with mandatory tissue collection for biomarker analysis, is ongoing.

447 Poster

A Comparison of Adjuvant Online and PREDICT in Estimating 10 Year Survival Benefit for Adjuvant Chemotherapy in a Clinical Setting

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Background: Adjuvant! is widely used to inform decision making about whether to offer adjuvant therapy in breast cancer by estimating the survival benefit afforded by hormone therapy and chemotherapy.

In 2010, a UK-based online prognostication model called PREDICT was launched, which takes into account the method of presentation (screen-detected or symptomatic) and HER-2 status.

The aim of this study was to determine if the use of PREDICT would alter our unit's recommendations for chemotherapy, which are currently based on Adjuvant!

Materials and Methods: The data for 150 consecutive women undergoing surgery for primary breast cancer were input into both models. Patients were excluded if they had received neoadjuvant hormone therapy of endocrine therapy.

The predicted 10 year survival benefit of adjuvant chemotherapy (above that derived from hormone therapy) was determined.

The results were categorised into <3% benefit − no chemotherapy, 3−5% benefit − discuss the option of chemotherapy and ⩾5% − recommend chemotherapy.

Results: The median age was 62 years (range 34−92) and 64 (43%) presented symptomatically. The number of patients in each group is shown in Table 1.

In 28 patients (19%) there were discordant results between the two models. In 17 of these 28, PREDICT upgraded the chemotherapy decision, whilst it downgraded it in 11.

The change in predicted survival benefit category was not related to either the method of presentation ($p = 0.2$) or the HER-2 status ($p = 1$) (Fisher's exact test).

Table 1

10 year Survival Benefit	Adjuvant!, n (%)	PREDICT, n (%)
<3%	87 (58)	93 (62)
3−5%	18 (12)	17 (11)
⩾5%	45 (30)	40 (27)

Conclusion: Using PREDICT would alter our unit's chemotherapy recommendation in 19% of patients. We plan to use both Adjuvant! and PREDICT in parallel to evaluate them further in the clinical setting.

448 Poster

Use of Acellular Dermis (Strattice TM) in Problematic Cases of Breast Reconstructive Surgery

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Background: Since 2002 we have analyzed 302 cases of skin and nipple sparing mastectomies. In 107 cases tissue-supporting extraneous materials such as meshes or acellular dermis have been used.

Because of its excellent texture the acellular dermis can in contrast to other tissue-supporting meshes be used as a direct tissue replacement.

Therefore it is insertable in situations of difficult skin envelope, after radiotherapy or after prior surgical intervention, or even when radiotherapy is planned after the immediate reconstructive surgery. With these indications acellular dermis can give an alternative to flap surgery.

Material and Methods: Since 03/11 we have performed 9 operations with sub muscular implant placement and coverage with acellular dermis. 8 patients had received a prior operation in the context of their breast cancer disease, thereof 4 had skin sparing mastectomy and radiotherapy and 5 had received chemotherapy.

Results: The acellular dermis was placed interpectoral. In 5 cases form and size was not changed and inserted horizontally, in 3 cases the acellular dermis was specifically cut and sewed vertical as a inner bra.

Two cases of wound complications with suture dehiscence could be solved operatively without removing the reconstruction and wound closure above the acellular dermis. None of the cases showed signs of postoperative infection. The average duration of drainage was 9 days (7−13).

Conclusions: The application of acellular dermis demands a detailed surgical planning. The maintenance of important individual surgical steps is quite different from other tissue-supporting materials.

The presented patient collective had a high risk for complications (former operation, former radiotherapy), but the cosmetic result was good and a second operation was could be spared.

449 Poster

Febrile Neutropenia (FN) in Early Breast Cancer Patients Receiving FEC-D − the Effect of Moving to Primary Granulocyte-colony Stimulating Factor (G-CSF) in the Mersey and Cheshire Cancer Network

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Background: In 2008 the Merseyside and Cheshire Cancer Network published its audit data citing a FN rate of 27% with the newly implemented regimen of FEC-D in node positive early breast cancer. As a consequence the network protocol was amended to recommend primary prophylaxis with pegylated G-CSF [1]. 3 years on we have re-audited this patient group to look at how this alteration has affected FN with this regimen.

Methods: The primary audit was undertaken looking at patients records who received FEC-D with adjuvant intent between March 2005 and November 2007. The second audit was undertaken utilising the same methodology between January and December 2010.

Results: The primary audit looked at 123 patients, their median age was 49. There were 33 episodes of FN, giving a rate of 26.8% and resulting in

11 courses of intravenous antibiotics, 24 courses of oral antibiotics and 115 inpatient days. The primary recommendation of this audit was to include primary prophylaxis with G-CSF in the FEC-D protocol.

The second audit identified 146 patients, their median age was 49. Primary prophylaxis was administered in 98% of cases. There were 17 episodes of FN, resulting in a FN rate of 11.6%. All of these cases had received prophylactic G-CSF. These episodes resulted in a total of 11 courses of intravenous antibiotics, 8 courses of oral antibiotics and 24 hospital admission days.

Conclusions: Near universal administration of primary G-CSF during FEC-D has been achieved resulting in a clear reduction in FN rate. Hospital admission days have also substantially reduced suggesting a possible financial benefit in addition to an improved patient experience.

References

[1] Ali Z, O'Reilly S, Zahoor T, Scholfield P, Malik Z. Experience of Febrile Neutropenia and secondary G-CSF Prophylaxis During FEC_D Chemotherapy in Merseyside and Chseshire Cancer Network. National Cancer Research Institute Cancer Conference 2008; Abstract B67

Friday, 23 March 2012 12:45–14:00

POSTER SESSION

Ductal and Lobular Carcinoma in Situ

450 Poster discussion

Is There a Different Prognosis Between Infiltrative Carcinoma of the Breast and Infiltrative Recurrences After Ductal Carcinoma in Situ of the Breast?

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Background: Local recurrence after breast-conserving treatment of Ductal Carcinoma In Situ (DCIS) occurs at around 8−20% and half of these local recurrences are invasive carcinoma.

The aim of this study was to compare the prognosis of these invasive recurrences after DCIS with prognosis after treatment of carcinomas that are invasive at diagnosis.

Material and Methods: From 1971 to 2003, we treated 1592 DCIS and 14450 invasive carcinomas (IC) at our institution. Overall, 111 recurrences were observed for DCIS patients, 61 (55%) of which were invasive (IR). We created two groups; the first based on all cases of IR and the second consisting of 2 IC matched to each IR on 3 criteria: age +/− 3 years, period of treatment (+/− 1 year) and cTNM. We compared survival outcomes between the two groups at 5 and 10 years after treatment and investigated prognostic differences.

Results: Clinical characteristics in terms of tumour grade, number of nodes affected and metastatic rates were similar across both groups. Clinical characteristics were similar in both groups as shown in Table 1.

Table 1. cTNM regarding each group

	T0	T1	T2	T3	T4	TX	N0	N>0	M+
IR, n = 61	34.4%	39.3%	13.1%	0.0%	1.6%	11.5%	72.1%	27.9%	13.1%
IC, n = 122	31.1%	41.8%	13.1%	0.8%	13.1%	0.0%	69.7%	29.5%	13.1%

Differences were observed in the types of treatment offered across groups: IR were more often treated by mastectomy (47.5% vs. 9.8%) and less frequently by radiotherapy than in the IC group (15% vs. 40% respectively). Chemotherapy was more systematically performed in the IC group than in the IR group (35.2% vs. 17%, p = 0.008).

There were no differences between overall survival rates across groups at 5 and 10 years (86.8% and 77.4% in the IR group vs. 89.7% and 76.6% in the IC group, p = 0.627).

Conclusions: Our results indicate that despite differences in treatment, such as twice the rate of chemotherapy for carcinoma that are invasive at diagnosis compared to invasive carcinoma occurring as recurrence after DCIS, both of these types of invasive carcinoma have the same outcomes in terms of survival.

451 Poster discussion

Underestimation Rate of Invasive Malignancy in Atypical Lobular Hyperplasia (ALH) and Lobular in Situ Carcinoma (LCIS)

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Background: The management of atypical lobular hyperplasia (ALH) and lobular in situ carcinoma (LCIS)discovered on breast biopsies is still controversial.

Some authors do not recommend surgical excision, and up to one third of the patients in the literature undergo radiological follow up.

The aim of this study was to assess the risk of invasive malignancy when ALH and LCIS are diagnosed on breast biopsy.

Methods: All cases of ALH and LCIS diagnosed by percutaneous biopsy at Saint-Louis hospital, (Paris, France), between January 2000 and January 2011 were identified from the computerized database of pathological reports.

Patients' characteristics, clinical, radiological patterns and subsequent management and outcome were collected from medical records.

Cases with an invasive lesion coexisting with ALH and LCIS and patients with missing pathological data after biopsy were excluded from the study.

Results: One hundred and seven pathological reports were identified, and 87 medical records were available for analysis, (ALH, n = 45, LCIS n = 46).

69 lesions were diagnosed by vacuum assisted biopsy (79.3%) and 18 by core needle biopsy (20.7%).

67 lesions (77%) (ALH n = 25 LCIS n = 42) were further managed by excision, either by lumpectomy (n = 53, 79%) or by mastectomy (n = 14, 21%). An invasive cancer (4 lobular, 3 ductal and 1 undetermined) was found in 8 of the 67 excision-based specimens, leading to an under-estimation rate of the biopsy of 11.9% for excised specimens (14.3% for CLIS and 8% for ALH).

Five patients were lost to follow-up. After a mean follow-up of 39 months, 2 additional ipsilateral (3.2%) and 3 controlateral (4.8%) invasive cancers were diagnosed.

20 lesions were managed by observation (ALH=18 and LCIS=2). After a mean follow-up of 40 months, 3 ipsilateral (15%) and 2 controlateral (10%) invasive malignancies were diagnosed.

Conclusion: Given the significant rate of under-estimation of invasive malignancy, we recommend to excise both atypical lobular hyperplasia and lobular in situ carcinoma when discovered on core biopsies.

Predictive factors of under-estimation should be investigated and validated before this attitude can give way to radiological follow-up.

Despite surgery, the risk of cancer remains high. The early diagnosis after biopsy suggests that multifocal or bilateral lesions pre-existed and that a meticulous local assessment is necessary.

MRI could be a useful tool regarding this issue.

452 Poster

Development and Validation of Nomogram to Predict Postoperative Invasive Component in Ductal Carcinoma in Situ at Core Needle Biopsy

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Background: This study was to develop and validate nomogram to predict underestimation of DCIS at breast core needle biopsy.

Material and Methods: We developed a nomogram using previous reported meta-analysis study about DCIS underestimation. The factors related DCIS underestimation was palpability (OR = 3.87), size more than 2 cm (OR = 2.28), mammographic mass (OR = 1.83), 14 g automated vs. 11 g vacuum assisted (OR = 1.85), histological high grade (OR = 1.79). We developed web-based nomogram using a linear regression model with intercept calibration. To validate the nomogram, we used a retrospective data from January 2003 to September 2011. The accuracy of the nomogram was validated by comparing expected value with observed value assuming Poisson distribution and Hosmer-Lemeshow test. The discrimination was validated by ROC curve analysis.

Results: The developed nomogram was posted at the website (http://user.dankook.ac.kr/~surgery/dcis/dcis-dku.htm). In the total sixty cases of DCIS cases diagnosed by core needle biopsy, twenty-nine cases (48.3%) were finally confirmed to have invasive component. The expected number of underestimation was not significantly different to the observed number according to the related factors. Also, the expected number was not significantly different to the observed number by the Hosmer-Lemeshow