more difficult radiological visualisation preoperatively. As a consequence, a higher incidence of tumour-positive excision margins after lumpectomy and an increased risk of conversion to mastectomy are noted. This explains why breast conserving therapy (BCT) is selected less commonly for women with ILA, although the treatment results are independent of the histological subtype, as confirmed in the EORTC "boost no-boost trial". In a recent population based study on BCT for ILC including 416 patients, the 5 and 8 years local recurrence risk was 3.5% and 6.4%, respectively, despite margin involvement in 29% of the patients after lumpectomy and still 17% when the re-excision was taken into account. In both the univariate and the multivariate analyses, no influence of the surgical margins on the local recurrence risk was found.

A less commonly known and accepted indication for post mastectomy radiotherapy is the case of ILC, independent of the tumour stage. The combined analysis of the EORTC 10801 and DBCG 82TM trials in early stage breast cancer demonstrated that, for this patient category, the local recurrence rate after mastectomy without radiotherapy was 19% at 10 years, compared to only 10% for patients who were treated with a breast conserving approach (HR 2.7, range 1.2−6.3).

In this era where more attention is drawn to the importance of local control even in patients with metastatic disease, it could also be taken into consideration that patients with lobular carcinomas survive significantly longer than other breast cancer patients, particularly from the time of diagnosis of distant metastases.

So in summary, despite the higher risk of an incomplete tumour excision, patients with early stage lobular cancer do not have a higher local recurrence risk after BCT than patients with ductal cancer and could be offered this treatment even after a (focally) microscopically incomplete tumour excision. For patients after mastectomy, lobular histology should also be considered as a separate prognostic factor in favour of referral for radiotherapy.

216 Invited

Risk for metastases and implications for systemic treatment

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Invasive lobular breast cancer (ILC) comprises approximately 5−15% of breast cancers. It appears to have a distinct biology and a different clinical behaviour than invasive ductal carcinoma (IDC).

Compared with IDC, ILC occurs more frequently in older patients, is larger in size and is more frequently oestrogen receptor and progesterone receptor positive. Moreover, ILC has a lower S-phase fraction, tends to be diploid, and is usually HER-2, p53 and epidermal growth factor receptor negative.

The pattern of metastatic dissemination is different for ILC and IDC. IIC is more likely to metastasize to the peritoneum, gastrointestinal tract and ovaries, whereas the lung, pleura, distant nodes and central nervous system are more frequently involved in IDC.

Despite having a more favourable biological profile, ILC is not associated with a better disease free or overall survival rate. In multivariate analyses, histologic type is not an independent prognostic factor for outcome.

However, there is evidence that the clinical and the pathological response to preoperative chemotherapy (PCT) are lower for ILC compared to IDC. This results in larger residual tumour volumes, more mastectomy rates and more positive resection margins after breast conservative surgery, leading to more "rescue" mastectomies. However, the low chemosensitivity to PCT of ILC can probably be explained by their biological profile, but this does not seem to result in a survival disadvantage. Since tumour downstaging is the main aim of PCT, patients with large ILC are probably not good candidates for PCT. In these patients, preoperative endocrine treatment should be further explored.

Recent data suggest that also in the adjuvant setting, adjuvant endocrine treatment results in better response for ILC compared to IDC. In elderly patients with medical comorbidities, who are poor candidates for cytotoxic chemotherapy, endocrine therapy can be a good alternative to improve patients' outcome with ILC.

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217 Proffered paper oral

Outcome of invasive lobular carcinoma compared to infiltrating ductal carcinoma: a population based study from British Columbia

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Background: Lobular carcinoma is the 2nd most common invasive breast cancer histology after ductal carcinoma. Though phenotypically they are different, the two histologies are often treated the same with presumed similar outcomes. We sought to compare the baseline demographics, standard pathologic factors and long term clinical outcomes between lobular and ductal carcinoma from a large population based breast cancer registry.

Methods: A retrospective cohort of referred patients to the BCCA with a diagnosis of stage I-III pure lobular or pure invasive ductal carcinoma from 1989–2000 was identified. Prior or synchronous breast cancers and cases with unknown grade were excluded. Standard demographic and pathologic factors was abstracted from the BCCA Breast Cancer Outcomes Unit database and compared between the two histologies. 10 year outcomes were calculated by Kaplan Meier method, with differences compared by log rank test. Median follow up for the entire cohort was 9.3 years.

Results: A total of 13,203 individual patients meeting identified inclusion criteria were identified: 11,911 invasive ductal and 1,292 invasive lobular cancers. Lobular carcinomas generally had a higher frequency of poor prognostic factors: older age ($\geqslant$70 years old), larger tumour size, and greater frequency of N2 nodal involvement (all $p < 0.001$). However lobular carcinomas also had a higher frequency of better predictive factors; ER+ status and low grade tumours (both $p < 0.001$). There were differences in locoregional treatments and systemic therapies between the groups. No differences were seen at 10 year estimated relapse free survival (76% vs 74%), distant RFS (78% vs 77%), breast cancer specific survival (81% vs 81%) and overall survival (69% vs 70%) between lobular and ductal cancers respectively. Only 10 year locoregional RFS significantly favored lobular cancers (93% vs 89%; $p < 0.001$), though there was also a higher mastectomy rate (55% vs 39%) in this cohort.

Conclusion: Though invasive lobular carcinomas are epidemiologically and phenotypically different from ductal carcinomas, clinical outcomes are comparable between these two common histologies.

218 Proffered paper oral

Preventing reoperation in invasive lobular breast cancer

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Background: Invasive lobular breast cancer (ILC), the 2nd most common breast malignancy, has an increasing incidence, higher failure rates of breast-conserving surgery (BCS) and higher reoperation rates compared to invasive ductal carcinoma (IDC). The value of MRI and associated ultrasound (US) in the workup of ILC has been established. Can reoperation and recurrence be decreased by implementing a clinical algorithm?

Methods: A clinical algorithm was designed with the purpose of lowering reoperation rates and recurrence. Biopsy-proven ILC patients underwent an MRI to estimate extension and feasibility of BCS. Abnormal MRI findings were followed by an US to confirm suspicious lesions and biopsy of these. Positive findings add up points (table 1). Patients $\leqslant$9 points underwent BCS, those $\geqslant$10 points underwent mastectomy. Consecutive patients were included in a 38 month period since 2006 and compared with 195 historical controls. Indication for reoperation: positive margins. Descriptive statistics and exact Fisher's test for *p.*

Results: Biopsy-proven ILC patients (n = 126) were included; 78 (61.9%) underwent BCS, 48 (38.09%) underwent mastectomy, 7 were reoperated. Reasons included close margins on final pathologic evaluation (n = 5), underestimation during intraoperative evaluation (n = 1), and lack of adherence to the clinical algorithm (n = 1). The reoperation rate was lowered to 5.55% compared to 16.92% ($p = 0.0029$). With a mean follow-up of 19.34 months (2−44, SD: 11.61), 4 patients died (2 of advanced second malignancies, 1 catheter-related sepsis in the context of lung cancer, and 1 initially metastatic breast cancer).