Background:
Breast cancer in females aged 35 years and under is uncommon and presents a diagnostic challenge to clinicians, given the high incidence of benign breast disease in this age group and high breast density.

Aim:
We sought to assess the use of ultrasound and mammograms at presentation in this cohort and examine the sensitivity of ultrasound guided fine needle aspiration cytology or core biopsy in diagnosing nodal spread.

Methods:
Multidisciplinary team meeting records over a one year period were reviewed to obtain list of patients diagnosed with breast cancer at 35 years of age or younger. PACS images and reports and Electronic Patient records were then retrospectively analysed.

Data collected:
- Ultrasound, Mammography, and Breast Density scores
- Cytology, pre- and post-operatively histology

Results:
- 24 women identified
- 25 patient episodes due to bilateral diagnosis
- Mean age at diagnosis = 32 years (Range: 26-35 years)
- 23 patients were symptomatic & 1 patient from screening
- The majority of patients (75%) were diagnosed with infiltrating ductal carcinoma on histological examination (Table 1).

<table>
<thead>
<tr>
<th>Pathological Subtype</th>
<th>No. of cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>IDC</td>
<td>18</td>
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<tr>
<td>DCIS</td>
<td>1</td>
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<tr>
<td>IDC +DCIS</td>
<td>4</td>
</tr>
<tr>
<td>ILC</td>
<td>1</td>
</tr>
</tbody>
</table>

Table 1. Pathological subtypes. Infiltrating ductal carcinoma (IDC), Ductal carcinoma in situ (DCIS), Infiltrating lobular carcinoma (ILC).

- 4 patients had distant metastases (brain or bone).

Ultrasound:
- All underwent ultrasound scan
- 32% of malignancies given U3 score (probably benign)

Conclusions:
- Almost one third of cancers were not suspected at initial ultrasound evaluation highlighting the need for early core biopsy of young women
- There is a high rate of metastatic nodal disease in this cohort in keeping with the known poorer prognosis
- Axillary sampling is less sensitive than in older women and lower thresholds for sampling may be required
- 63% of patients had a suspicious lesion at mammography despite a high incidence of dense breasts