2013 BREAST Survey Report

In November 2013, BREAST surveyed 64 Australian clinicians who have had experience with at least one BREAST test set since the beginning of the programme. The aim was to gauge reader satisfaction and collect their opinions for the continuous improvement of BREAST. The following reports on the key findings, lessons learnt and actions that BREAST will undertake to satisfy that aim.

Who did the survey?

- 80% of respondents were radiologists
- 12% registrars
- 8% breast physicians

Where did they do the test set?

- 63% of readers performed the test set at BreastScreen clinics
- 37% of readers performed the test set at a RANZCR conference
- 80% of readers performed the test set on a SECTRA workstation
- 19% of readers performed the test set on a HOLOGIC workstation

The test set experience

- 76% of readers found the quality of the cases to be above average to excellent
- 24% of readers found the quality of the cases to be average to below average
- 62% of readers found the test set somewhat difficult to very difficult
- 38% of readers felt neutral about the level of difficulty; none found it easy

Features of the test set

- 71% of readers would like to be able to choose the ‘nature of abnormality’ (calcification, asymmetric density, stellate lesion, architectural distortion, etc.) as an additional feature in the test set
- 10% did not want the ‘nature of abnormality’ feature added
- 51% of readers said they were likely to do another test set within 3 months
- 94% of readers said that test sets were important to very important for their professional development
Experience with the software (Ziltron)

- 67% of readers were satisfied to very satisfied with using the software
- 10% were felt dissatisfied
- 88% of readers found the immediate feedback on the software helpful to very helpful
- 6% found it unhelpful

Performance reports

- 87% of readers found the performance report containing graphs that was emailed to them useful
- 5% did not find the report useful

Ranking scores from most meaningful (1) to least meaningful (9)

1. Specificity
2. Sensitivity
3. False negative
4. True positive
5. False positive
6. Lesion sensitivity
7. True negative
8. ROC
9. JAFROC

What readers liked most about BREAST: Summary of comments

- It furthers my on-going education and get CPD points.
- Good cases; well organized.
- Able to practice, review answers and learn from mistakes.
- Quite fun and a good chance to get rapid feedback; An enjoyable way to learn.
- See more cancers in one session than may be seen in months of reading/clinical practice.
It’s a good opportunity to get a more detailed and external evaluation of myself as a reader in an unfamiliar environment and comparison of my performance with others.

**What readers liked least about BREAST: Summary of comments**

- Little time to do the test set outside of conferences.
- No face to face contact.
- Slightly unclear regarding benign and equivocal lesions.
- It was never clear to me if I should mark all lesions that I see and grade them, or just read like I would in a normal screen-reading environment.
- Artificial environment with above normal number of cancers which changed my recall rate artificially.
- Issues with my logon; IT response time is poor.
- Cumbersome navigation between Ziltron and PACS to display images; Images did not sync automatically on the diagnostic screen.

**Suggested ways to improve BREAST: Summary of comments**

- Improve login; make it easier.
- There should be clearer and more detailed instructions about how to record your observations. Perhaps start the test set with an example already done to illustrate how to record and grade the lesions, and which lesions to ignore for purposes of the test. Also I would like to see other scores stratified out e.g. do older readers have less sensitivity, does wearing glasses make a difference, does experience make a difference, etc.
- Update the performance statistics as more readers have done the test set.
- More locations and accessibility. It’s a great program and would be useful for revision nearer the exam but BreastScreen is difficult to get to after hours.
- Tomosynthesis as a routine part of BreastScreen
- More feedback about false positives so you can reduce recall rate.
- Make feedback clearer.
<table>
<thead>
<tr>
<th>Lessons</th>
<th>Actions</th>
<th>Timeframe</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. While most readers engage with the test sets at their local SAS workstation (online version), we capture nearly 40% of BreastScreen readers at workshops during RANZCR conferences (using the mobile, off-line version of the programme).</td>
<td>This encourages us to continue to pursue funding to enable us to offering BREAST workshops at key RANZCR meetings each year (ASM and BIG); and to continue to develop and improve the mobile aspect of the programme.</td>
<td>On going; By June 2014</td>
</tr>
<tr>
<td>2. The majority of readers enjoyed the image quality of the newer test sets Sydney and Darwin, over that of Hobart, the first online test set.</td>
<td>Continue to ensure that image quality of cases is at optimum and/or improved with every new test set released annually.</td>
<td>On going</td>
</tr>
<tr>
<td>3. The majority of readers expressed interest in being assessed on their ability to identify the ‘nature of abnormality’ of lesions within the BREAST test sets.</td>
<td>Explore the feasibility of developing future test sets with this capability.</td>
<td>By June 2014</td>
</tr>
</tbody>
</table>
| 4. The comments indicate that readers were not aware of the windowing tools available in Ziltron such as zooming and adjusting contrast/brightness, had login difficulties, and difficulty navigating between two detached systems (Ziltron and PACS). | Create a 2-minute instructional film clip on how to login and use Ziltron specially highlighting the following:  
- How to use the Ziltron windowing tools  
- That the software should primarily be used for scoring and marking the cases, and full viewing should be done via PACS and the high resolution monitors.  
- Important things to know before progressing to the next case such as the inability to go back a case, and how to erase errors on the current case before progressing to the next. | By June 2014 |
<table>
<thead>
<tr>
<th></th>
<th>Lessons</th>
<th>Actions</th>
<th>Timeframe</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.</td>
<td>The comments indicate that readers were not clear about which lesions to mark and how to record their observations.</td>
<td>Include in Action 4. Clarify that readers do not need to identify small calcifications and only need to identify lesions that are graded 3, 4 or 5.</td>
<td>By June 2014</td>
</tr>
<tr>
<td>6.</td>
<td>While most readers found the feedback (online and reporting) useful, they did indicate their preferred order of the scores in terms of relevance and personal importance. There is also indication that the meaning of each score is not clear.</td>
<td>In performance reporting, adjust the scores presentation in accordance with the order recommended above and include definition of each metric.</td>
<td>Done</td>
</tr>
</tbody>
</table>
| 7. | While half of the readers said that they would engage with another test set in the next 3 months, most who responded negatively did so because they were not aware that there were additional online test sets. The test sets available are: Hobart – NSW, ACT, SA, VIC, TAS, WA/NT, QLD Sydney – NSW*, ACT, SA, TAS, WA/NT, NZ Darwin – NSW, SA, WA/NT, NZ  

*Temporarily removed from access until 30/01/2015 due to a research project.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Work with state Program leaders and SAS leaders to increase participation rates (minimum 30% per state) to then expedite the local roll-out of further test sets. Suggest issuing a timeframe for completing test sets. There are currently 3 test sets available with the 4th to be launched in September 2014.                                                                                                                                                                                                                                                                                                                                                                      | On going   |
<table>
<thead>
<tr>
<th>Lessons</th>
<th>Actions</th>
<th>Timeframe</th>
</tr>
</thead>
</table>
| 8. A reader expressed interest the findings of BREAST research in relation to reader characteristics and scores. | Send reader that Rawashdeh MA, et al paper, “Markers of good performance in mammography are dependent on number of annual readings.” (Radiology 2013)  
Highlight BREAST journal publications to participants by updating readers on BREAST output in leading journals.  
Expand the research capacity of BREAST with the launch of the BREAST Access and Management Committee (BAMC) in 2014, the body managing the research activities arising from BREAST generated data. | Done; Ongoing; 2014 |