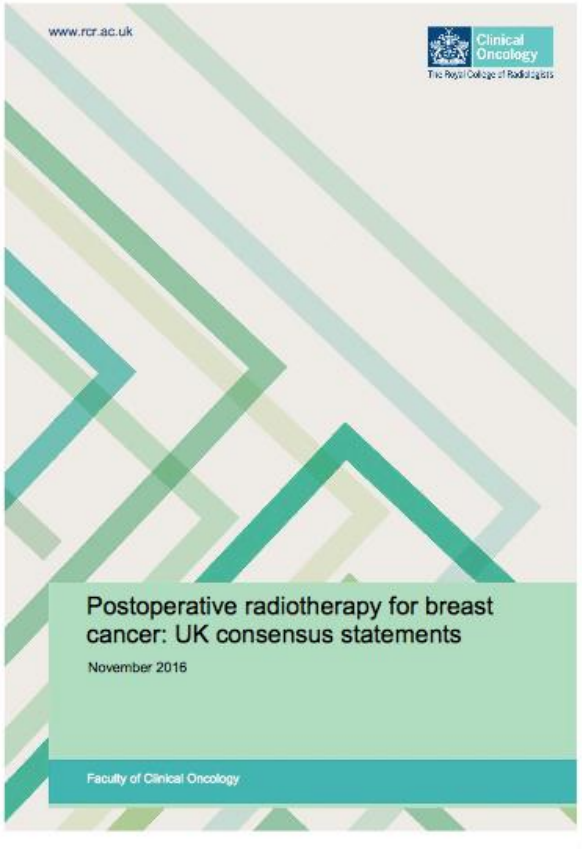

How best to influence practice?

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As an oncology community comprising all the professional groups, commissioners and – above all – patients, we have an opportunity to clearly state the expected standard for breast radiotherapy across the UK. This should help ensure equity of treatment for all, regardless of postcode.

The United Kingdom (UK) has made a major contribution to clinical research in breast radiotherapy due the commitment of multdisciplinary teams (MDTs): clinical oncologists, radiographers, dosimetrists, physicists and patient advocates. This has created a culture of improving radiotherapy quality through clinical trials. However, the highest standards of evidence-based breast cancer radiotherapy have not been introduced consistently in a timely and universal fashion due to limited resources and training.

A core group consisting of:

•patient representatives from 'Independent Cancer Patient Voice’
•lay member from The Royal College of Radiologists (RCR)
• multidisciplinary breast cancer specialist health professionals representing therapeutic radiographers (The Society and College of Radiographers)
•clinical oncologists (the RCR and UK Breast Cancer Meeting),
•radiotherapy physicists (Institute of Physics and Engineering in Medicine)
•breast surgeons (Association of Breast Surgery)
•an NHS England commissioner

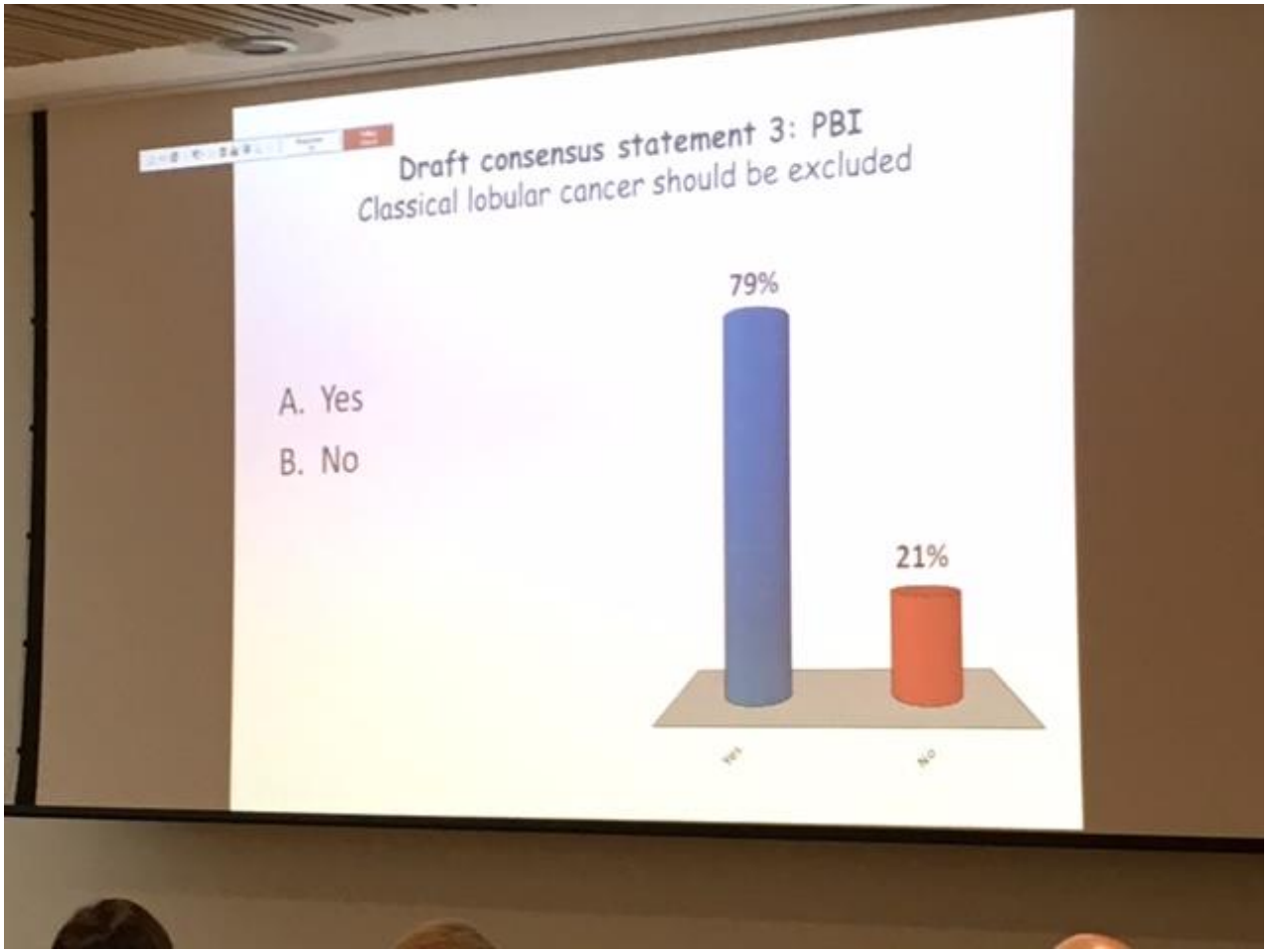
Developed a series of short statements around optimal breast radiotherapy practice and a questionnaire about current practice in breast radiotherapy.

- Contacts were established with 53 out of 62 centres, of which 38 provided comments on the practice statements and 39 completed the questionnaire.

- Feedback was incorporated into presentations given by members of the core group at a consensus meeting held at the RCR in March 2016.

- Forty eight centres were represented at this meeting


Turning Technologies
ResponseCard RF
1/A
2/B
4/D


Draft consensus statement 3: PBI
Classical lobular cancer should be excluded
A. Yes
B. No
79%
21%

Unanimous support	100%
Very strongly supported	90–99%
Strongly supported	70–89%
Majority support	60–69%
Equipoise	50–59%
Rejected	<50%

Evidence was presented to support practice statements and discussion was facilitated by core group chairs. Representatives were then asked to vote on behalf of their centre.

Members of the core group took notes of the discussion.

UK consensus statements

Cardiac sparing

Cardiac-sparing radiotherapy should be considered the standard of care for patients with left-sided breast cancer.

- The heart should routinely be excluded from the radiotherapy field.
- All UK radiotherapy departments should have a breath-hold technique available.
- A target mean heart dose would help departments to implement breath-hold.
- In left-breast-affected patients undergoing radiotherapy not including the internal mammary chain (IMC), >90% of patients should be treated to a mean heart dose of <2 Gray (Gy).

Breast boost radiotherapy after breast-conserving surgery

Tumour bed boost

- A tumour bed boost should be considered for all patients with invasive breast cancer who are less than 50 years old.
- Consider the benefit of a tumour bed boost for those over 50 years with higher risk pathological features (especially Grade 3 and/or extensive intraductal component).
- A hypofractionated boost using a similar fraction size as the whole breast is acceptable; it should be equivalent to 16 Gray (Gy) in eight fractions.

Breast-conserving surgery and tumour bed clips

- Tumour bed clips should be considered the standard of care to improve planning (and delivery) of the boost.

Safe omission of radiotherapy after breast-conserving surgery

Avoidance of radiotherapy should be considered:

- In women deemed to be at very low risk of local recurrence, for example patients ≥70 years out of a research study and ≥60 years in study with T1N0 oestrogen receptor positive (ER+), progesterone receptor positive (PR+), human epidermal growth factor receptor negative (HER2-), Grade 1–2 tumours AND who are willing to take adjuvant endocrine therapy for a minimum of five years AND have regular mammograms for ten years. These criteria are best fulfilled within the UK PRIMETIME bio-marker directed study and participation is recommended.

Internal mammary chain radiotherapy

- Internal mammary chain (IMC) radiotherapy should be considered in patients at high risk of recurrence (that is, T4 and/or N2–3 disease).
- IMC radiotherapy should be considered in patients at intermediate risk of recurrence (that is, 1–3 axillary macrometastases and central/medial disease, who have been recommended locoregional irradiation).
- IMC radiotherapy should be given using techniques which minimise doses to organs-at-risk. Every centre should have a breath-hold technique available for patients undergoing IMC radiotherapy.
- The following dose constraints are recommended for IMC radiotherapy: heart $V_{17\ Gray\ (Gy)}$ <10%, ipsilateral lung V_{17Gy} <35%, mean contralateral breast dose <3.5 Gy; in patients at intermediate risk of recurrence, a mean heart dose <6 Gy is considered a reasonable objective.

Hypofractionation

- There is no indication to use more than 15 fractions for the breast, chest wall or nodal areas for standard adjuvant treatment.

Axillary management of sentinel lymph node-positive disease*

Further local treatment for the malignant sentinel lymph node (SLN) in individuals with early invasive breast cancer:

- **Sentinel nodes with isolated tumour cells and/or micrometastases** – no further axillary treatment is required in addition to breast-conserving surgery or mastectomy.
- **1–2 sentinel nodes with macrometastases** – further axillary treatment is no longer mandatory in breast conservation with whole-breast radiotherapy in patients who are postmenopausal and have T1, Grade 1 or 2, oestrogen receptor positive (ER+) and human epidermal growth factor receptor negative (HER2-) tumours. *These patients could also be entered into the POSNOC or equivalent clinical trial.*
- **Three or more sentinel nodes with macrometastases** – patients should usually be recommended to have further axillary treatment.
- **Further axillary treatment** should usually be recommended for patients undergoing mastectomy or with tumours with one or more of the following features: T3, Grade 3, ER- or HER2+. *These patients could also be entered into the POSNOC or equivalent clinical trial.*
- No consensus was reached on the management of the axilla for patients with one or more of the following features: premenopausal status, T2 tumours, lymphovascular invasion or extranodal spread.

These statements were agreed by the Trustees of the Association of Breast Surgery (ABS) following the ABS Multidisciplinary Consensus Meeting on the further management of the malignant axillary node, held in London on 26 January 2015.

Partial breast radiotherapy after breast-conserving surgery

- Can be considered for patients ≥50 years, Grade 1–2, ≤3 centimetres (cm), oestrogen receptor positive (ER+), human epidermal growth factor receptor negative (HER2-), N0 with minimum 1 millimetre (mm) radial excision margins for invasive disease, using either (i) external beam radiotherapy with 40 Gray (Gy) in 15 fractions over three weeks or (ii) multicatheter brachytherapy using fractionation schedules as per the Groupe Européen de Curiethérapie and European Society for Radiotherapy and Oncology (GEC-ESTRO) trial.
- Classical lobular cancer and/or lymphovascular space invasion should be excluded.