COMMENTARY

The practical application of the UK 5-point scoring system for breast imaging: how standardisation of reporting supports the multidisciplinary team

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The Breast Imaging Reporting and Data System (BI-RADS) was initiated in the United States in the late 1980s to provide a standardised description of imaging features of breast lesions and to relate them to the underlying pathology and risk of malignancy. Features that were helpful in predicting benign or malignant pathology were chosen, originally for mammography and subsequently for ultrasound [1]. BI-RADS has been used as an education tool and to improve quality across the United States and it is now mandatory to include BI-RADS information in mammography reports. Given the diverse nature of practice in the United States with a spectrum of imaging availability and expertise including large dedicated breast centres and small practices where individual clinicians report relatively small numbers of cases, BI-RADS may have been the essential tool in achieving conformity.

There are now 6 categories for each feature: 0, incomplete; 1, negative; 2, benign finding(s); 3, probably benign; 4, suspicious abnormality; 5, highly suggestive of malignancy; and 6, known biopsy-proven malignancy. The fourth category is subdivided into a, b and c. The risk of malignancy for each category is well established [2] and studies evaluating observer variability show fair concordance for features describing categories 1, 2, 3 and 5, although there is interobserver variability for the BI-RADS 4 subcategories [3].

BI-RADS is proven to be of value in the standardisation of reporting and is intended to provide clear guidance on further management; however, it has not

been widely adopted in the UK. There are philosophical differences between accepted protocols for investigating breast lesions in the United States and the UK that limit the applications of the BI-RADS in the UK. In particular, lesions at a low risk of malignancy (BI-RADS 3 and 4a) [4] undergo short-term follow-up in the United States but, if palpable, would be subject to biopsy in the UK [5]. The reasons for this are unclear, although when BI-RADS was introduced in the United States some facilities only had mammographic services and limited access to image-guided biopsy (especially core biopsy), which is now more readily available. This may account for the different approach to breast diagnosis together with other considerations, such as reimbursement policies and avoidance of litigation.

A 5-point scoring system for mammography, ultrasound and cytology was described in the UK in 1998 [6]. This differed from the BI-RADS as it included pathology results and supported the use of triple assessment by clinical examination, imaging and the needle test to improve sensitivity and specificity in the evaluation of breast lesions. Use of this system became fairly widespread, reinforced by the standards imposed by the National Health Service breast screening programme. The UK 5-point breast imaging scoring system has recently been formalised by Maxwell et al [7] on behalf of the Royal College of Radiologists (RCR) Breast Group. It promotes standardisation of reporting and is easily understood by all members of the multidisciplinary team. However, unlike BI-RADS, at present it does not give the likelihood of malignancy in each category.

Therefore the article by Taylor et al [8] in this issue of the *British Journal of Radiology* is timely. The article describes mammography and ultrasound data from

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23 741 assessment episodes to quantify the likelihood of cancer with each of the 5 points on the UK scoring system and compares them with points of equivalent cancer risk on the BI-RADS score. This will provide a benchmark for centres to audit the unit's performance. The positive impact that BI-RADS has had on raising standards and unifying research data cannot be underestimated. It has been extensively researched and validated and it is time now for the RCR Breast Group classification to undergo this rigorous testing.

The UK 5-point breast imaging scoring system should be used for communication across the multidisciplinary team with analogous systems for clinical examination, MRI, cytology and histopathology reporting. Any discordance between the clinical scoring systems must be resolved before the management of each case is concluded.

The careful development and application of a universally accepted scoring system for breast lesions has played an important role in the diagnosis of breast disease, especially in improving the sensitivity and specificity of diagnosticians and optimising the diagnosis of significant disease while minimising harm by over-investigation. As with BI-RADS, the UK 5-point breast imaging scoring system will continue to evolve and has the capacity to incorporate emerging techniques and modalities. It provides an example of how the imaging community can collaborate to standardise practice and ultimately improve patient care.

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