The Daffodil Centre

Reporting cancer recurrence of primary invasive breast cancer by clinicopathological characteristics - a review

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Background

Female breast cancer is the leading cause of cancer death in women globally. Despite the availability of effective treatments, recurrence can occur, with prognosis associated with clinicopathological characteristics of the primary diagnosed breast cancer (Carreno et al., 2007). The body of evidence on breast cancer recurrence by grade, size, stage, and histology at primary and recurrent diagnosis is important for understanding how recurrent breast cancer is associated with primary diagnosis and the burden of recurrence at a population level. We therefore conducted a review to assess the reporting of recurrent breast cancer events in the general population according to clinicopathological features.

Methods

We used a variation of the PECO framework: the population was defined as women from the general population aged 18-75 years diagnosed with primary invasive breast cancer; exposure included all breast cancer histological types; the outcome was recurrence of breast cancer, which was defined as an event occurring after treatment in individuals who were disease-free for ≥6 months before a secondary diagnosis or before receiving secondary treatment or death in response to a new breast malignancy (local or distant).

Literature published in English was searched systematically using Medline, and EMBASE from January 2010 to June 2021. Single person case reports, conference abstracts, and publications focusing on high-risk women were excluded. Title, abstract, full text screening, and extraction of pre-specified study details were performed by a single reviewer and the latter checked by a second reviewer.

Results

Of 2026 potentially relevant articles, 63 were eligible for inclusion, from 24 countries. Of these, 39.6% (n=25) reported the grade of the originally diagnosed breast cancers and of those only 6.3% (n=4) studies reported recurrence data according to baseline grade information. Similarly, 44.4% (n=28) studies reported tumour size, of which three presented recurrence data according to this characteristic. Tumour histology was reported in 20 studies and tumour subtype in 7 but recurrence data was only reported in 2 studies for each of these features. Although stage was reported for the whole study cohort in 10 studies, recurrence data by stage was not reported by any. Of the studies noted above reporting recurrence according to grade, size, histology, and subtype (n=5) all were published recently (2016-2020).
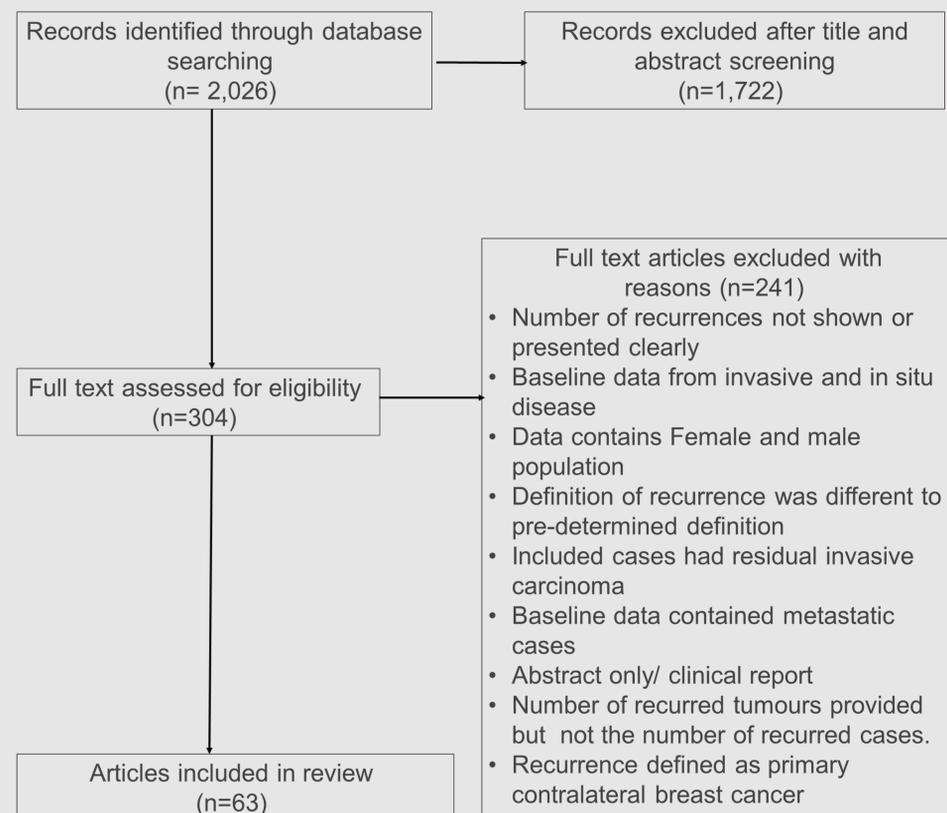

Figure 1: PRISMA flowchart presenting the number of identified records, included and excluded and reasons for exclusion.
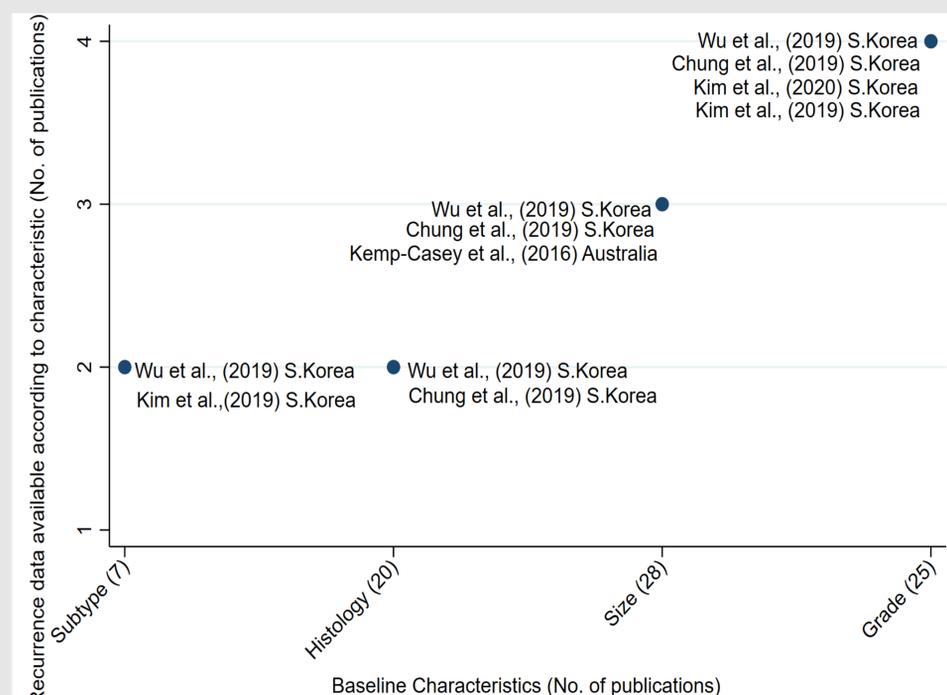

Figure 2: Number of publications of recurrence data according to tumour characteristics

Conclusion

It is important to understand breast recurrence according to clinicopathological features, however, the findings of this review indicate that reporting such detail in published literature is limited.

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