

## Microinvasive breast carcinoma: An analysis from ten *Senonetwork Italia* breast centres

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### Abstract

#### Background and objectives

We studied a large series of ductal carcinoma *in situ* with microinvasion (MIDC) an infrequent disease whose diagnosis and management are not well defined.

#### Methods

17,431 cases of breast carcinoma were treated between 2011 and 2016 by ten Italian Breast Units. Our analysis included diagnostic and clinic-pathological characteristics, surgical management, and the use of adjuvant therapies.

#### Results

15,091 cases (86.6%) were infiltrating carcinomas (IC), 2107 (12.1%) ductal carcinoma in situ (DCIS), and 233 (1.3%) MIDC. Age at diagnosis did not differ between DCIS and MIDC. MIDC were usually larger and expressed more frequently biologically aggressive features (higher Ki67 values, hormone receptor negativity and HER2/neu over-expression) ( $p < 0.01$ ). Axillary lymph nodes were involved in 25 MIDC cases (12%), but  $>3$  lymph nodes were involved in two cases only (1%). At multivariable analysis, only lymphovascular invasion (LVI) was associated with lymph node status ( $p < 0.01$ ). Hormone therapy was prescribed in 388/1462 DCIS cases (26.5%), in 84/200 MIDC cases (42%), and in 11,086/14,188 IC cases (84.7%) ( $p < 0.01$ ). Chemotherapy was administered in 28/190 MIDC cases (14.7%), and in 4080/11,548 IC cases (35.3%) ( $p < 0.001$ ).

## **Conclusions**

This is one of the largest studies of MIDC reported in the literature. Approximately 10% of DCIS harbor one or more foci of MIDC, and the latter often expresses aggressive biological features. LVI is a predictor of axillary node involvement, but this is infrequent and usually limited. Conservative surgery is performed less often than in DCIS, and adjuvant chemotherapy is less frequently utilized compared to IC.

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