IMPATTO DEL GRADO DI COINVOLGIMENTO DEL LINFONODO SENTINELLA NELL'OUTCOME DI PAZIENTI AFFETTE DA CARCINOMA INVASIVO DELLA MAMMELLA: ANALISI DI 1040 CASI TRATTATI ALL'UNIVERSITÀ DI FIRENZE

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Background

- The tumor status of the axillary lymph nodes is regarded as one of the most important prognostic factors in women with early breast cancer.
- Sentinel lymph node (SLN) biopsy has become the standard staging procedure for patients with invasive BC, largely replacing axillary node dissection (ALND).
- The exact impact on prognosis of SLN tumor burden is still object of controversy.

Patients and methods

- 1 040 consecutive patients with clinical stage I-III invasive BC were prospectively collected on our Institutional BC database from January 2001 to January 2007.
- Patients were stratified into the following four groups based on the tumor burden of the SLN.

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Stratification of SLN tumor burden

Macrometastases	• Tumor deposit ≥2 mm
Micrometastases	• Tumor deposit ≥0.2 mm and <2 mm
ITC	• Isolated tumor cells or tumor deposit <0.2 mm
Negative	• No evidence of tumor

AJCC cancer staging manual (7th ed). New York, NY:Springer; 2010

Main characteristic of analyzed series

Feature	Negative (n=878)	ITC (n=63)	Micrometastases (n=66)	Macrometastases (n=33)
Mean age, years (SD)	58.7 (10.9)	59.1 (11.5)	57.5 (11.6)	53.9 (11.1)
pT 2-3, n (%)	132 (15.1)	10 (15.9)	7 (10.6)	12 (36.4)
LVI presence	94 (10.7)	7 (11.1)	28 (42.4)	14 (42.4)
Nuclear grade 3	193 (22.0)	13 (20.6)	14 (21.2)	10 (30.3)
ER positive status	784 (89.3)	57 (90.5)	58 (87.9)	29 (87.9)
PgR positive status	697 (79.4)	52 (82.5)	53 (80.3)	26 (78.8)
HER2 positive status	92 (11.7)	5 (8.1)	16 (25.0)	7 (21.9)
Ki 67 ≥20%	198 (22.6)	17 (27.0)	20 (30.3)	7 (21.2)
Adjuvant CT	141 (16.1)	11 (17.5)	35 (53.0)	25 (75.8)
Adjuvant HT	647 (73.7)	49 (77.8)	55 (83.3)	24 (72.7)

Main events occurred during follow-up stratified by SLN status

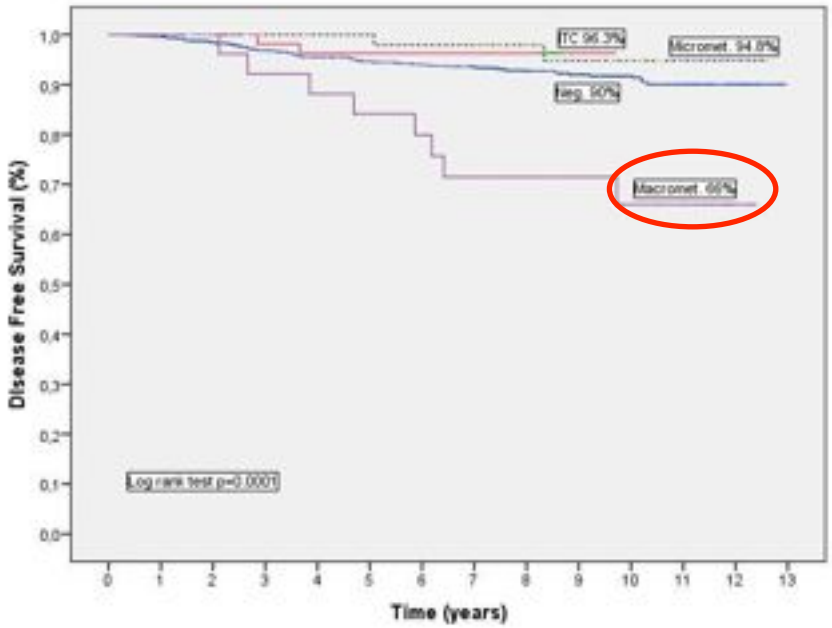
	Negative n=878 N (%)	ITC n=63 N (%)	Micrometastases n=66 N (%)	Macrometastases n=33 N (%)	Total n=1 040 N
Locoregional recurrence (LRR)	31 (3.5)	1 (1.6)	1 (1.5)	3 (9.1)	36
Distant Metastases (DM)	36 (4.1)	1 (1.6)	2 (3.0)	5 (15.2)	44
Events (LRR+DM)	60 (6.8)	2 (3.2)	2 (3.0)	8 (24.2)	72
Deaths	26 (3.0)	1 (1.6)	2 (3.0)	4 (12.1)	33

Median follow-up: **8.6 years**

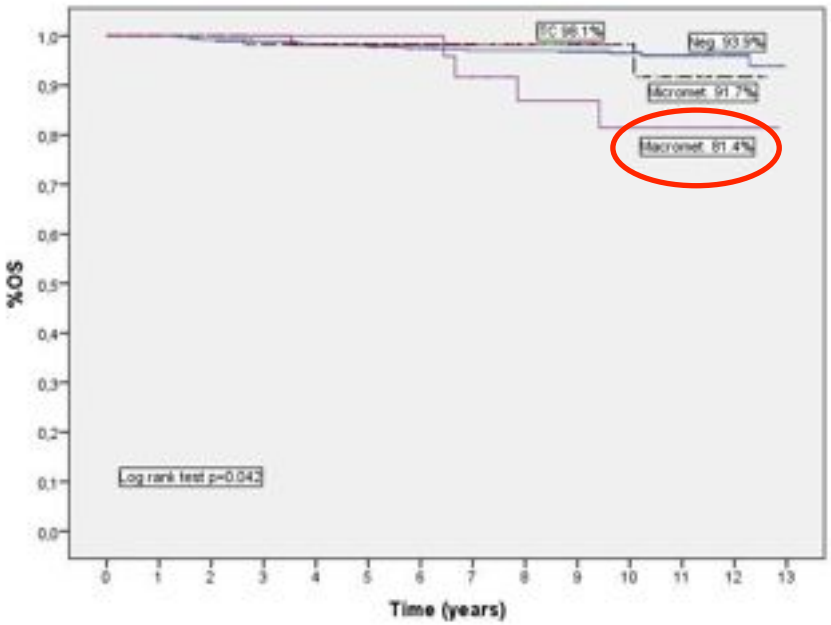
The tumor burden of SLN metastases resulted significant predictor of DFS ($P<0.0001$) and OS ($P=0.042$)

Impact of Macromets on DSF and OS

DFS



OS



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Statistical Analysis

Univariate analysis

- ER & PgR status
- Ki-67 index
- Nuclear Grade
- SLN macrometastases

Multivariate analysis

- Ki-67 > 20%
- SLN macrometastases

Conclusions

Patients with SLN micrometastases or ITC, do not seem to have a worse DFS or OS compared with SLN negative cases.

There is a significant decrease in DFS and OS in patients with macrometastatic disease in the SLN.