

# Are Clinicopathologic Features of Invasive Breast Cancer At Initial Diagnosis Predictive of Metastatic Disease?

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## BACKGROUND

- The NCCN, ASCO and ESMO recommend radiological imaging to stage symptomatic patients and those with clinical stage III breast cancer
- Despite existing guidelines, physician variability in obtaining metastatic workup results in overutilization of diagnostic tests, false positives, delay in care and increased health care costs
- We sought to identify clinicopathological features at diagnosis that could be predictive of metastatic disease to guide future testing

## METHODS

- Patients diagnosed with invasive breast cancer from 1<sup>st</sup> January 2014 to 31<sup>st</sup> December 2015 were identified from institutional database
- Patient variables collected included demographics, pathology, receptor profiles, clinical TNM staging and rates of upstaging to stage 4 disease
- Frequencies and percentages reported for categorical variables were assessed using Pearson's  $\chi^2$  test using SPSS, version 22.0

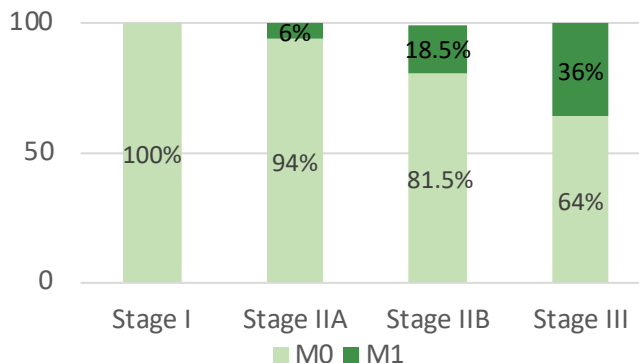


Figure | Clinical TNM Stage at Presentation and Rate of Upstaging to M1. p-value <0.001

Clinical T and N at Diagnosis	After Metastatic Workup	
	M0	Upstaged to M1
T1	58/63 (92.1%)	5/63 (7.90%)
T2	158/181 (87.3%)	23/181 (12.7%)
T3	41/54 (75.9%)	13/54 (24.1%)
T4	50/79 (63.3%)	29/79 (36.7%)
N0	151/160 (94.4%)	9/160 (5.60%)
N1	137/176 (77.8%)	39/176 (22.2%)
N2	14/27 (51.9%)	13/27 (48.1%)
N3	2/6 (33.3%)	4/6 (66.7%)
Unknown	4/9 (44.4%)	5/9 (55.6%)

Table | Correlation of Clinical T size and nodal status with rate of upstaging to M1 . p-value <0.001

## RESULTS

- Overall 70/378 (18.5%) had metastatic disease at diagnosis
- Advancing clinical stage, tumor size and nodal status resulted in statistically significant (p<0.001) upstaging to M1 disease
- Age and Receptor status were not independently predictive of upstaging to stage IV disease
- Almost 40% of tumors were Grade II and were associated with statistically significant upstaging (p=0.02)

## CONCLUSION

- Advancing clinical stage at presentation was predictive of upstaging to M1 disease
- The higher rate of upstaging in grade II versus grade III tumors warrants further study

## REFERENCES

- National Comprehensive Cancer Network. Breast Cancer (Version 2.2020). [https://www.nccn.org/professionals/physician\\_gls/pdf/breast\\_blocks.pdf](https://www.nccn.org/professionals/physician_gls/pdf/breast_blocks.pdf). Accessed February 5, 2020.
- Chagpar A, Babiera G, Aguirre J, Caropreso P, Hughes T. Variation in metastatic workup for patients with invasive breast cancer. *Am J Surg.* 2015;210(6):1144-1147. doi:10.1016/j.amjsurg.2015.06.032