

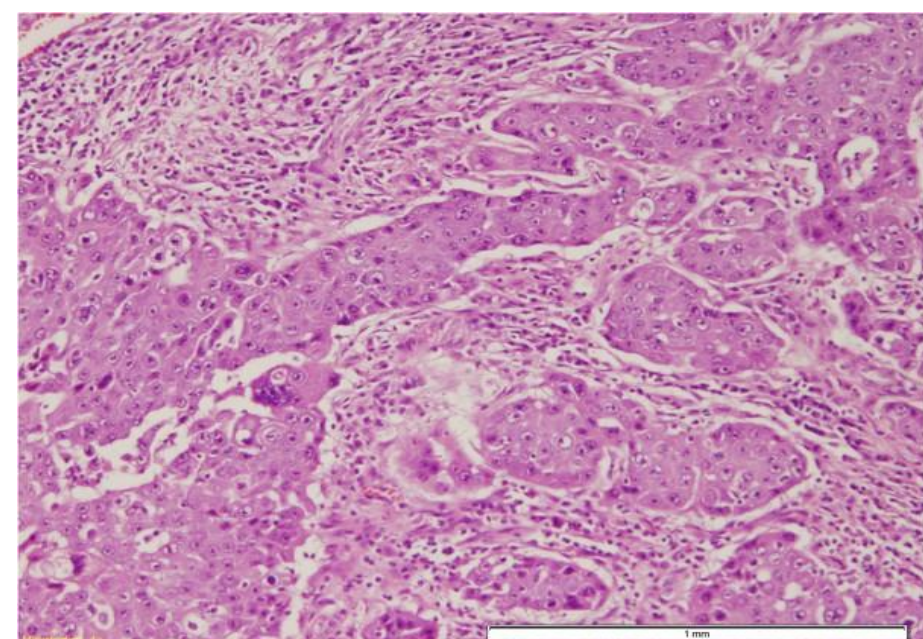
Metaplastic Breast Cancer: Clinical and Prognostic Features

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Introduction

- Metaplastic breast cancer (MpBC) is a rare and aggressive malignancy
- MpBC is characterized by the differentiation of neoplastic epithelium into epithelial and mesenchymal components
- Carries a poorer prognosis than invasive ductal carcinoma

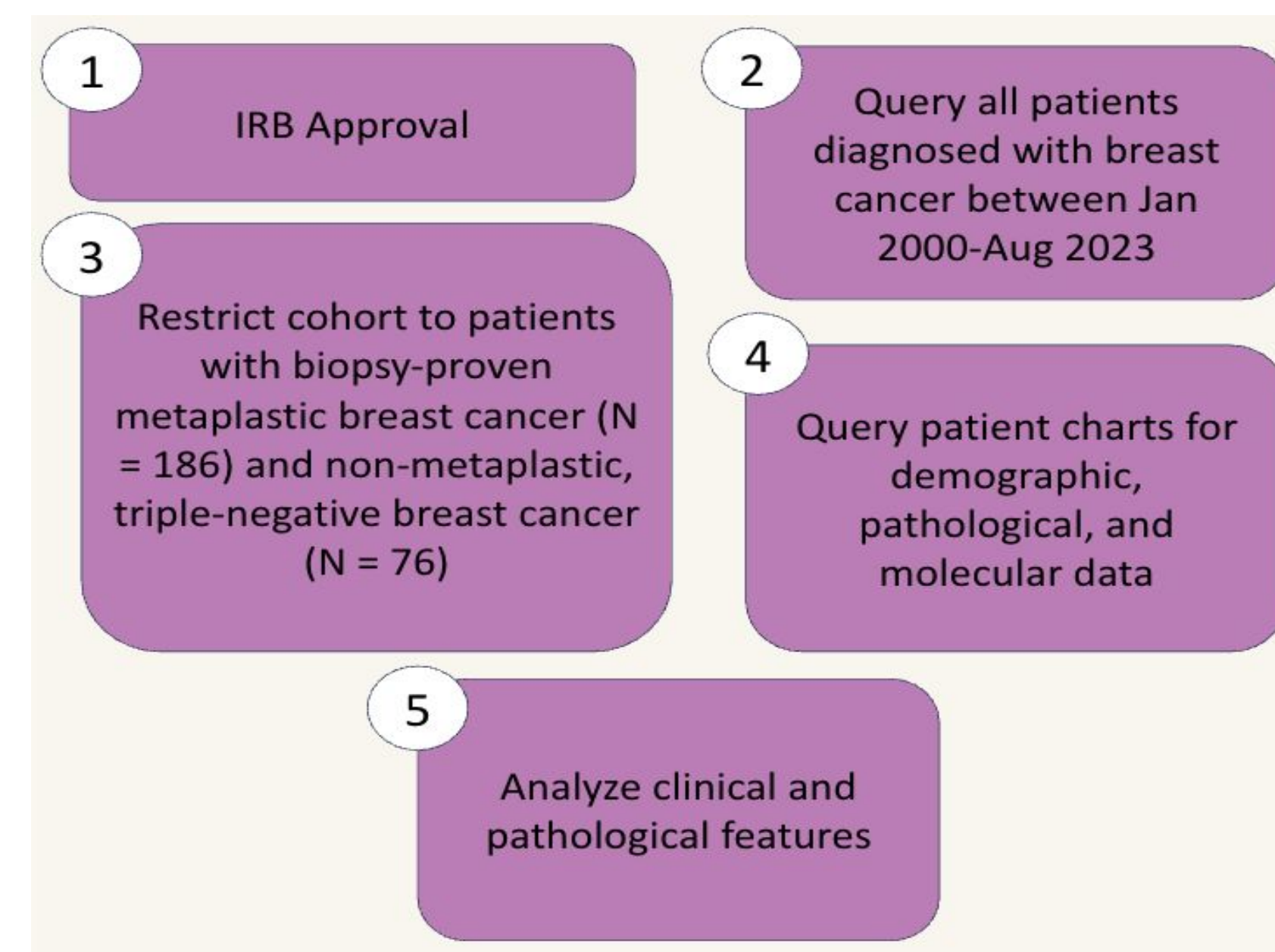


Pathology of a MpBC tumor demonstrating differentiation of the neoplastic epithelium into mesenchymal elements¹.

Aims and Objectives

- Collect and analyze demographics, tumor characteristics, staging, metastasis data, hormone receptor status, molecular data, and survival outcomes from electronic medical records of patients diagnosed with metaplastic breast cancer and non-metaplastic, triple-negative breast cancer.
- Compare clinical presentation, metastatic patterns, and overall survival between MpBC and non-metaplastic triple-negative breast cancer.
- Evaluate the association between hormone receptor status and PD-L1 expression with overall survival.

Methods



Results

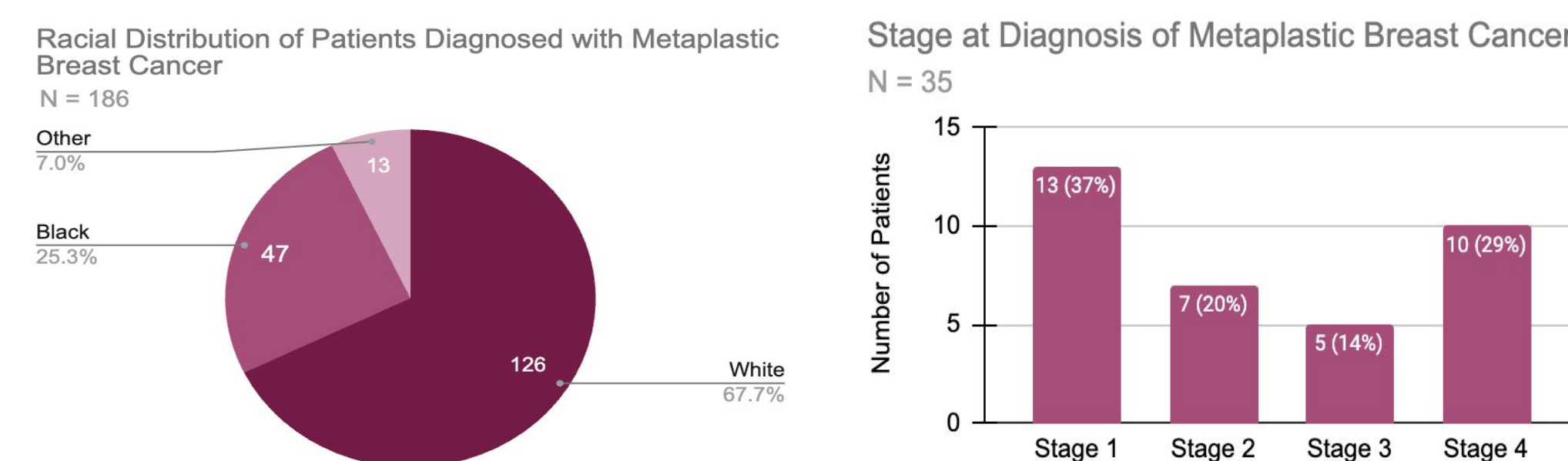


Fig 1a, 1b. Racial and staging distribution of MpBC patients at diagnosis

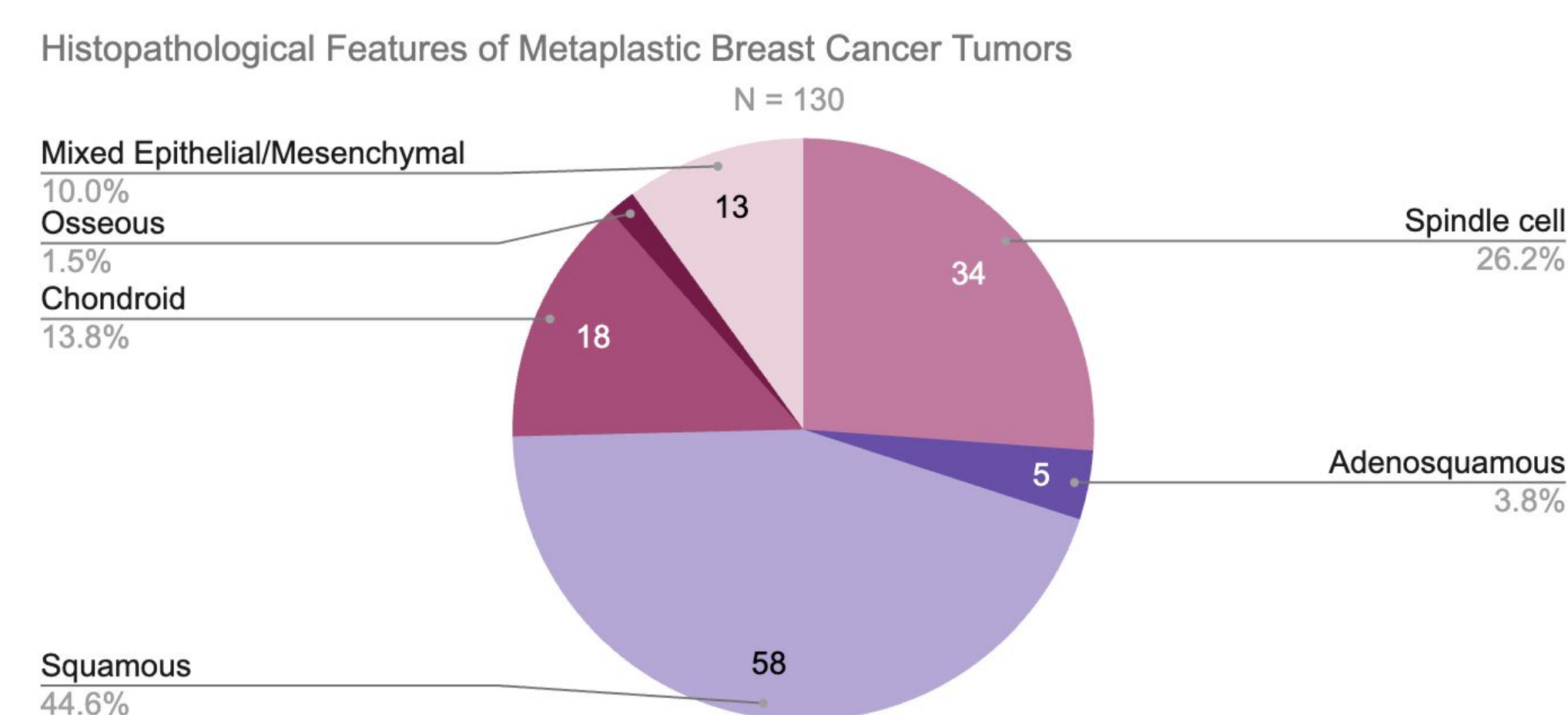


Fig 2. MpBC tumors demonstrate histopathological heterogeneity

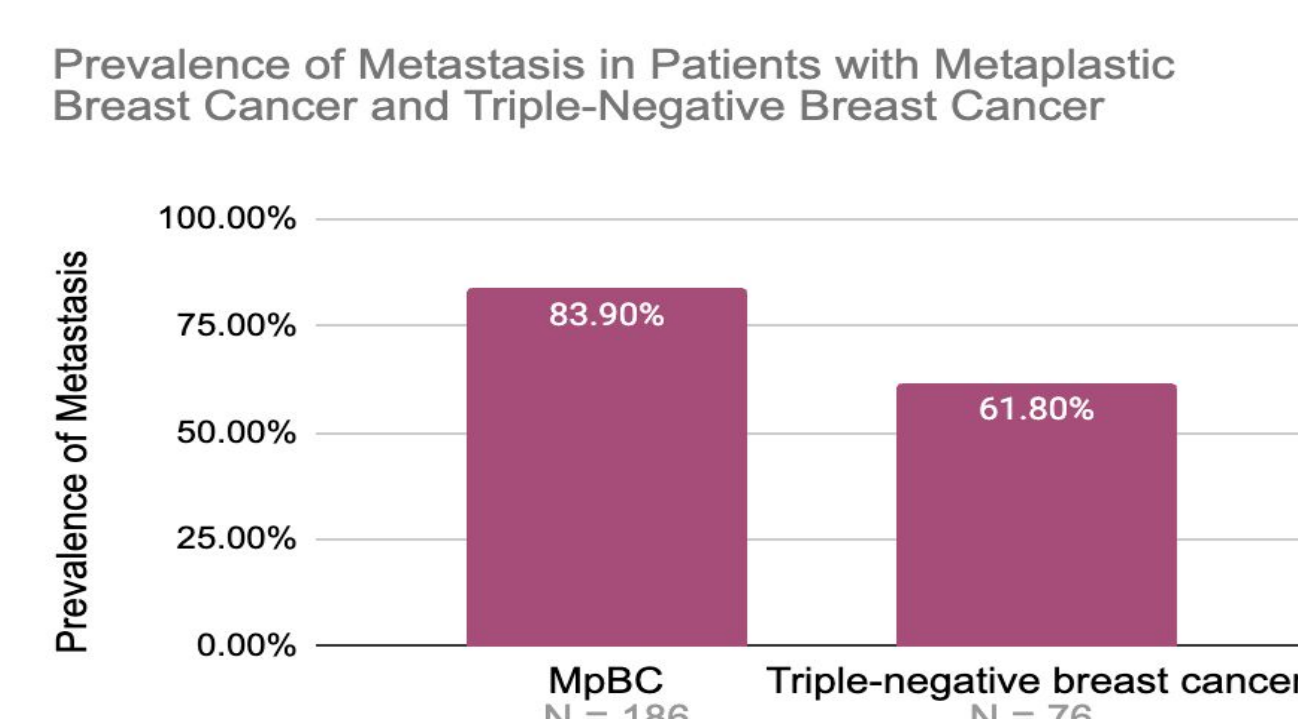


Fig 3. Metastasis was more frequently observed in MpBC cases compared to TNBC cases, commonly affecting the lungs, bones, liver, and brain.

Results Cont.

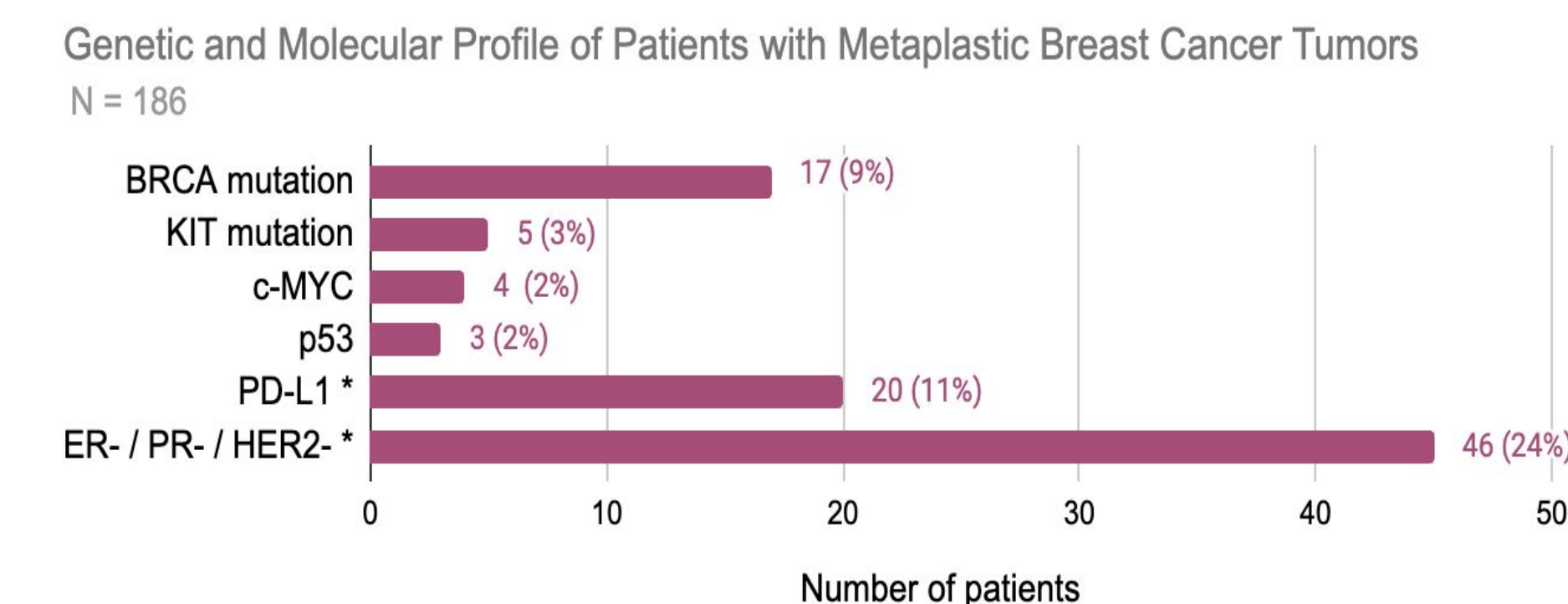


Fig 4. Frequently encountered mutations in MpBC included BRCA, KIT, c- MYC, and p53; PD-L1 expression was detected in 8.1% (n=15), and triple-negative status in 24% (n=45) of MpBC cases.

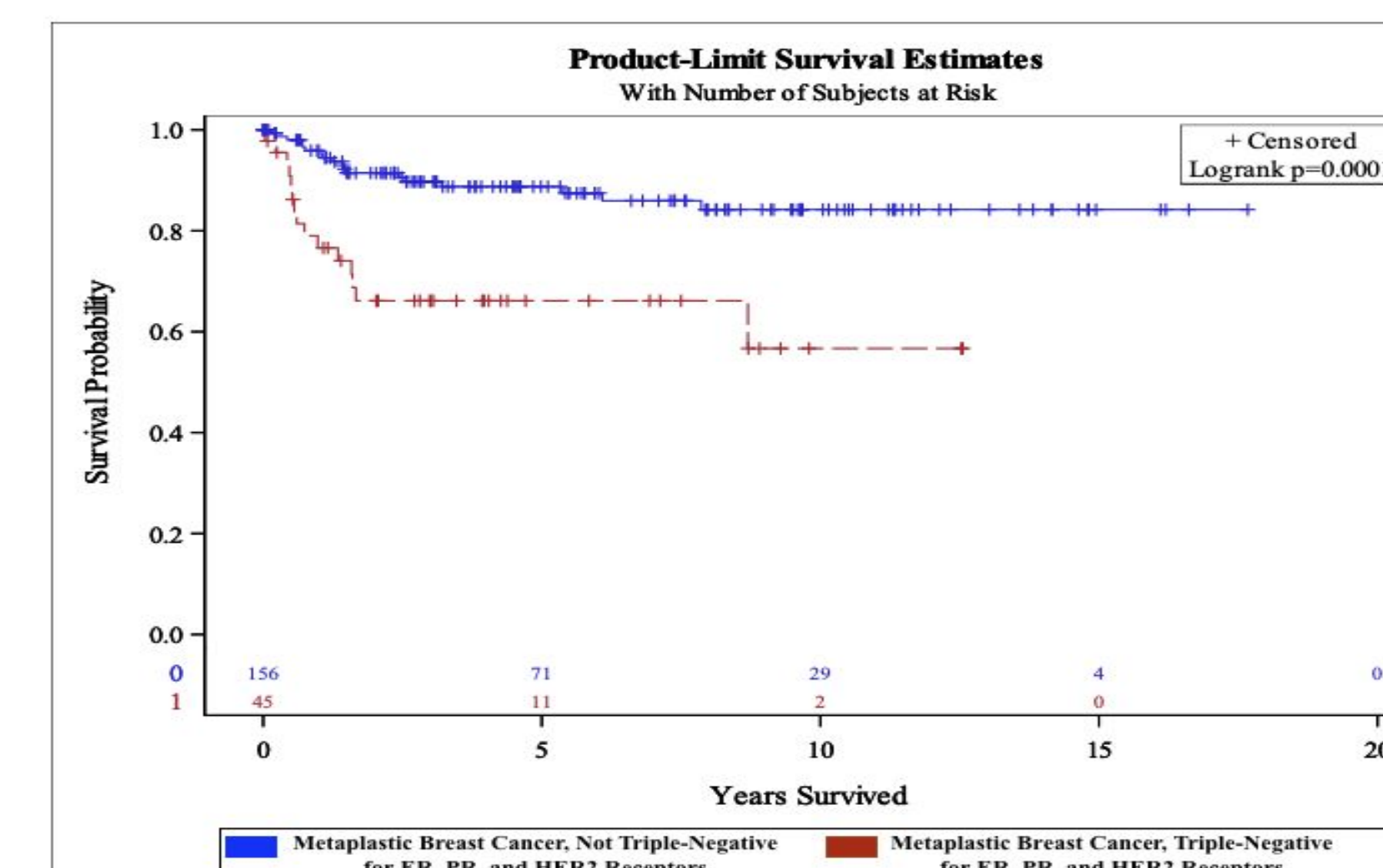


Fig 5a. Overall survival probability for patients with MpBC based on differential expression of estrogen, progesterone, and HER2 receptors.

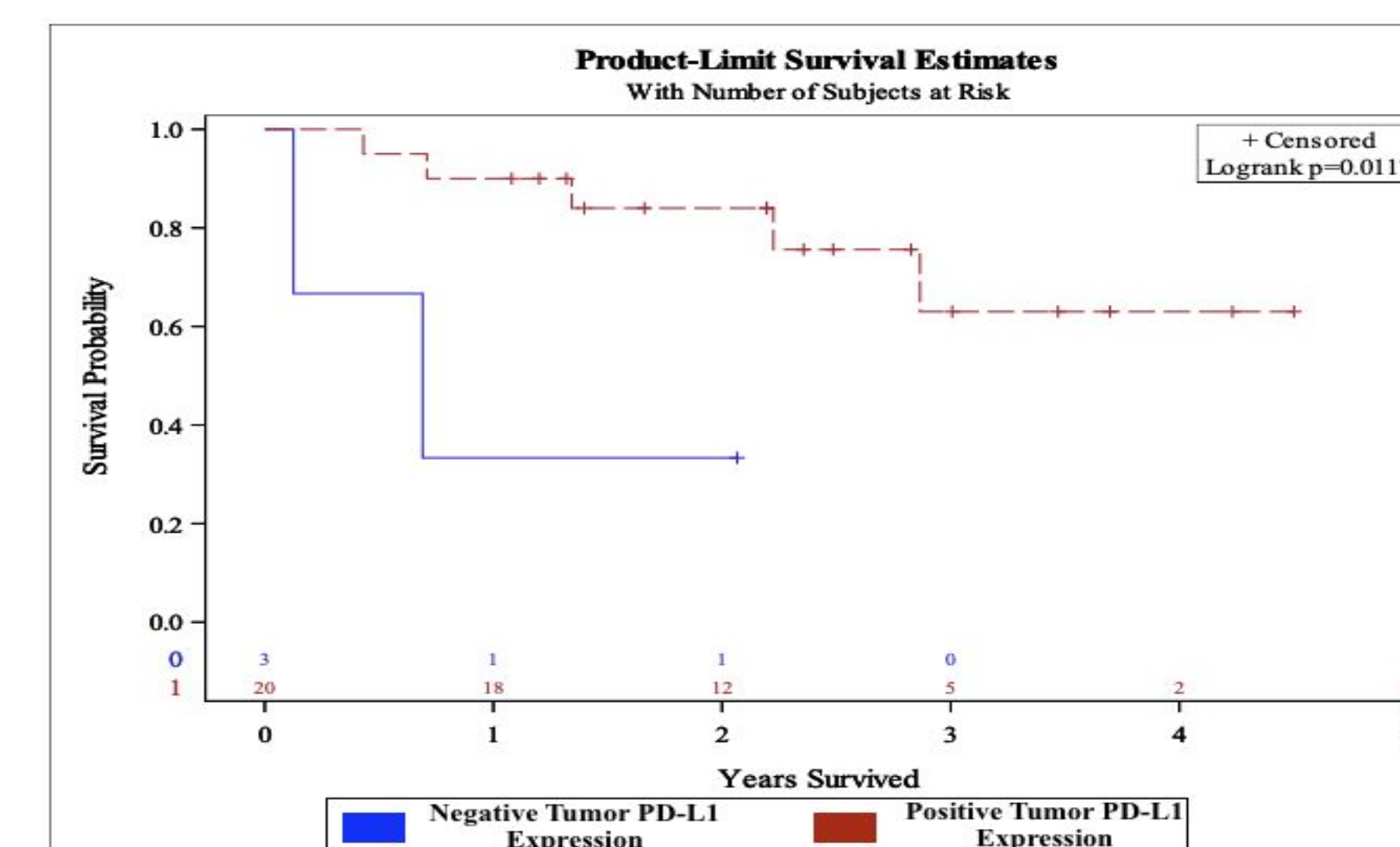


Fig 5b. Overall survival probability for patients with MpBC based on PD-L1 tumor expression.

Conclusions

- Metaplastic breast cancer (MpBC) exhibits significant histopathologic and molecular heterogeneity.
- MpBC had higher rates of metastasis than non-metaplastic breast cancer, but without a significant difference in overall survival.
- Histopathologic subtype did not significantly influence overall survival.
- Triple-negative status was associated with decreased overall survival, and PD-L1 negativity was associated with increased mortality.

References

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