

PATHOLOGICAL RESPONSE TO NEOADJUVANT CHEMOTHERAPY IN LUMINAL A-LIKE AND LUMINAL B-LIKE BREAST CANCER

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BACKGROUND AND OBJECTIVE

Luminal breast cancers differ in proliferative activity and chemotherapy sensitivity. This study compared clinicopathological characteristics and pathological response after neoadjuvant chemotherapy between Luminal A-like and Luminal B-like disease.

SUBTYPE DEFINITIONS USED

LUMINAL A-LIKE	Hormone receptor-positive, HER2-negative and Ki-67 <20%
LUMINAL B-LIKE	Hormone receptor-positive, HER2-negative and Ki-67 ≥20%

METHODS

- Retrospective comparative cohort of 201 patients.
- Luminal A-like: n=102; Luminal B-like: n=99.
- Pathological response categories: complete, partial, stable/no response and progression.
- Categorical variables were compared using Fisher’s exact or chi-square tests.

CLINICOPATHOLOGICAL COMPARISON

Characteristic	A-like n=102	B-like n=99	p
Median age, years	42	41	0.20
Premenopausal	67.6%	87.9%	<0.001
IDC histology	83.3%	97.0%	0.001
Grade 3	14.7%	46.5%	<0.001
Clinical N1	52.9%	62.6%	0.20
Mastectomy	43.1%	31.3%	0.11
LVSI-positive	17.6%	15.2%	0.71
ENE-positive	43.1%	28.3%	0.039

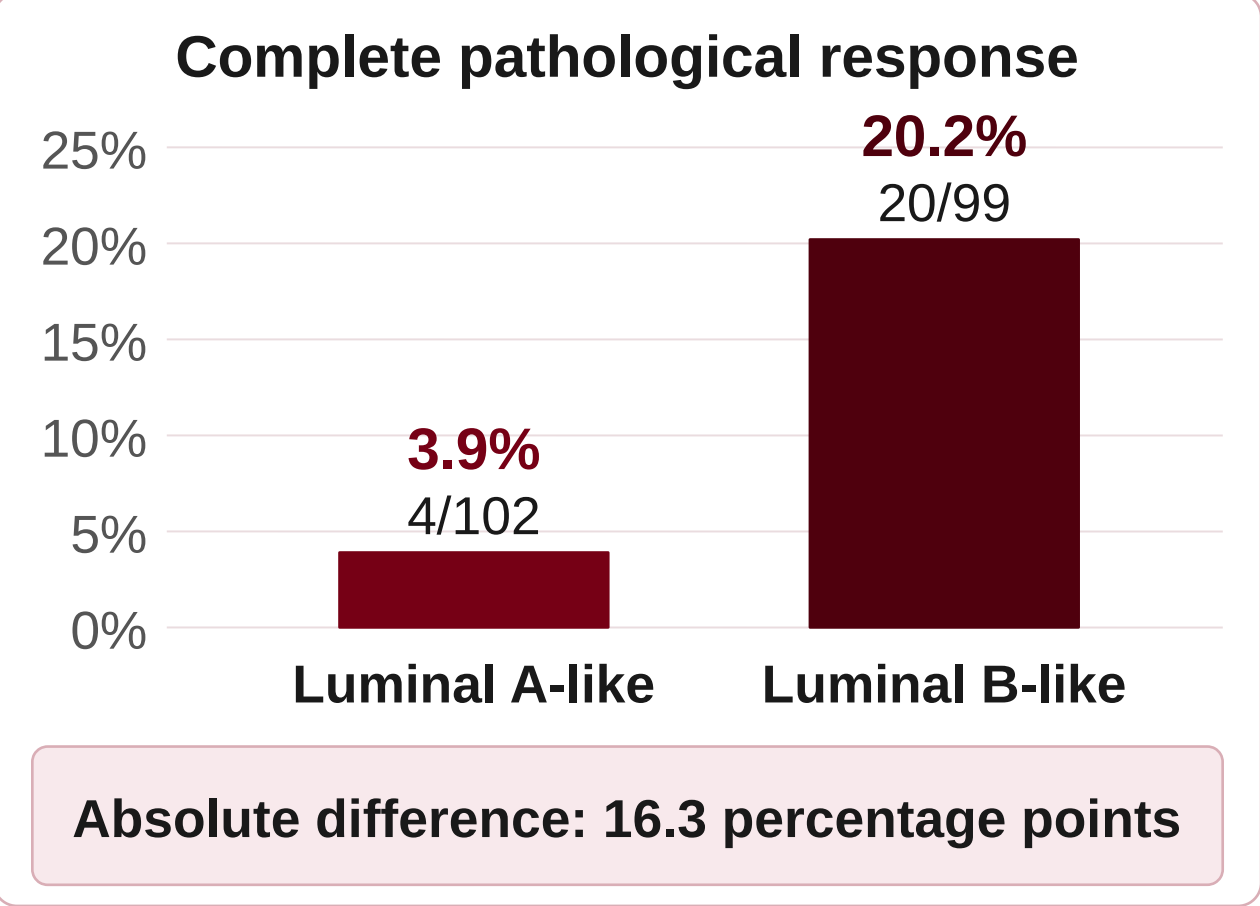
DISCUSSION

The higher complete-response rate in Luminal B-like disease is consistent with published evidence. Garufi et al. reported pCR rates of 13.1% in Luminal B-like versus 5.3% in Luminal A-like tumours. Higher Ki-67 and very low PR expression independently predicted pCR. Kim et al. also found that higher Ki-67 was associated with tumour response in luminal HER2-negative disease. [1,2]

REFERENCES

- Garufi G, et al. Ther Adv Med Oncol. 2023;15:17588359221138657. doi:10.1177/17588359221138657.
- Kim HS, et al. J Breast Cancer. 2019;22(3):412-424. doi:10.4048/jbc.2019.22.e35.

PATHOLOGICAL RESPONSE



OVERALL RESPONSE DISTRIBUTION

	A-like	B-like
Complete	3.9%	20.2%
Partial	33.3%	46.5%
Stable / no response	21.6%	11.1%
Progression	41.2%	22.2%

Overall distribution: $\chi^2 = 22.34$ | $p < 0.001$

KEY FINDINGS

- Complete response was approximately fivefold more frequent in Luminal B-like disease.
- Progression: 41.2% in A-like versus 22.2% in B-like disease.
- Grade 3 tumours: 14.7% versus 46.5%, respectively.
- Premenopausal status: 67.6% versus 87.9%, respectively.

CONCLUSION

Luminal B-like disease showed a significantly higher pathological response than Luminal A-like disease, despite a greater proportion of grade 3 tumours.