A Systematic Review and Extracted Individual Patient Data Meta-analysis of Long-Term Outcomes in Triple-Negative Breast Cancer after a Pathologic Complete Response: Does the Type of Neoadjuvant Therapy Matter?

Lis Victória Ravani[1]; Seth A. Wander[2]; Marleen Kok[3]; Kelly McCann[4]; Javier Cortes[5]; Romualdo Barroso-Sousa[6]; Maryam Lustberg[7]; José Bines[8]; Isabella Michelon[9]; Laura Testa[10]; Ming Wang[11]; Daxuan Deng[12]; Renata Colombo Bonadio[10,13]

[1] Faculdade de Medicina da Universidade de São Paulo; [2] Massachusetts General Hospital Cancer Center; [3] The Netherlands Cancer Institute; [4] University of California Los Angeles Medical Center; [5] International Breast Cancer Center (IBCC); [6] DASA Oncology; [7] Yale Cancer Center; [8] Instituto Nacional de Cancer, Rio de Janeiro; [9] University of Virginia Comprehensive Cancer Center; [10] Instituto do Câncer do Estado de São Paulo; [11] Case Western Reserve University School of Medicine; [12] Penn State University College of Medicine; [13] Instituto D'Or de Pesquisa e Ensino

BACKGROUND AND OBJECTIVES

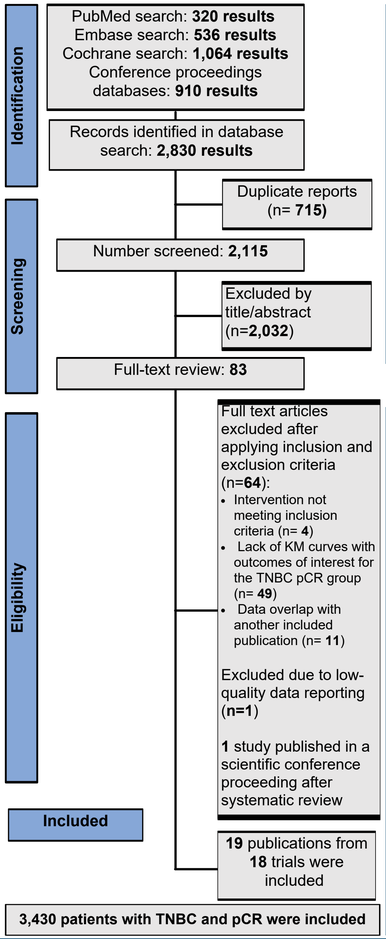
- Neoadjuvant chemotherapy is standard of care for stage IB-III triple-negative breast cancer (TNBC), with pathological complete response (pCR) strongly associated with survival.
- Although the escalation of neoadjuvant therapies with platinum and immune checkpoint inhibitors (ICI) improves pCR rates and long-term outcomes, patients with pCR in the control arms of pivotal trials also show favorable outcomes.
- Whether the type of neoadjuvant regimen leading to pCR impacts long-term survival differently is largely unknown.

METHODS

- We conducted a systematic review and meta-analysis, searching PubMed, Embase, Cochrane, and conference proceedings for phase II and III trials including patients with early-stage TNBC and pCR.
- A pooled analysis of Kaplan-Meier-derived individual patient data was performed for event-free survival (EFS) and overall survival (OS), with subgroup analyses by treatment regimens.

Copies of this poster obtained through Quick Response (QR) Code are for personal use only and may not be reproduced without permission from SABCS® and the author of this poster.

Figure 1: PRISMA flow diagram of study screening and selection.



RESULTS

Figure 2: Forest plot showing HRs and 5-year survival rates for the main comparisons: regimens with or without ICIs; regimens with or without platinum; regimens with or without anthracyclines; regimens with 6 or 8 cycles of chemotherapy; and regimens with or without adjuvant ICI (following neoadjuvant ICI treatment)

Comparison	Intervention	Control	HR (95% CI)	Survival rates
Event-free survival				
ICI vs Non-ICI	1240	2060	0.67 (0.50 to 0.89)	92.3% vs 89.0%
Platinum vs Non-platinum	2407	367	0.55 (0.20 to 1.50)	90.4% vs 91.1%
Anthracycline vs Non-anthracycline	3064	268	0.86 (0.51 to 1.45)	90.0% vs 90.5%
Adjuvant ICI vs Non-adjuvant ICI	1079	161	1.16 (0.55 to 2.44)	92.3% vs 94.3%
8 vs 6 chemotherapy cycles	2978	214	0.87 (0.49 to 1.55)	90.1% vs 88.9%
Overall survival				
ICI vs Non-ICI	573	651	0.84 (0.50 to 1.41)	95.3% vs 94.9%
Platinum vs Non-platinum	980	167	0.33 (0.09 to 1.22)	94.8% vs 94.7%
Adjuvant ICI vs Non-adjuvant ICI	495	78	2.91 (0.40 to 21.37)	94.9% vs 98.6%

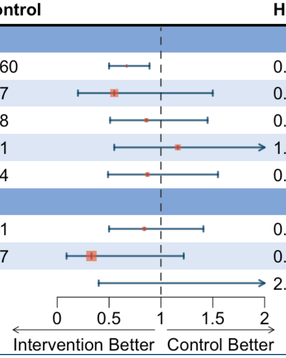


Figure 3: Pooled Kaplan–Meier curves of EFS comparing: A) ICI vs. non-ICI; B) Adjuvant ICI vs. non-adjuvant ICI; C) Platinum vs. non-platinum; and D) Anthracycline vs. non-anthracycline regimens.

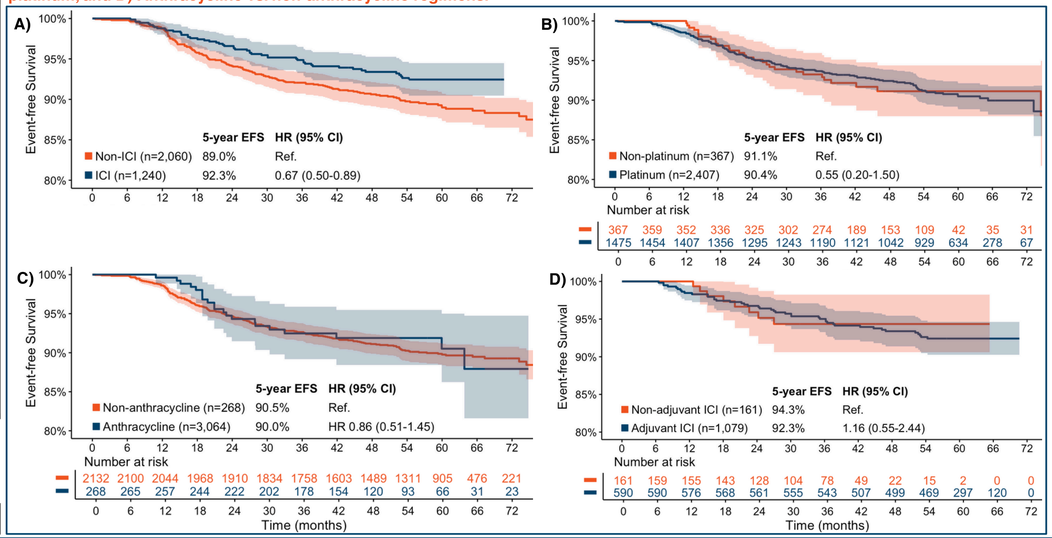
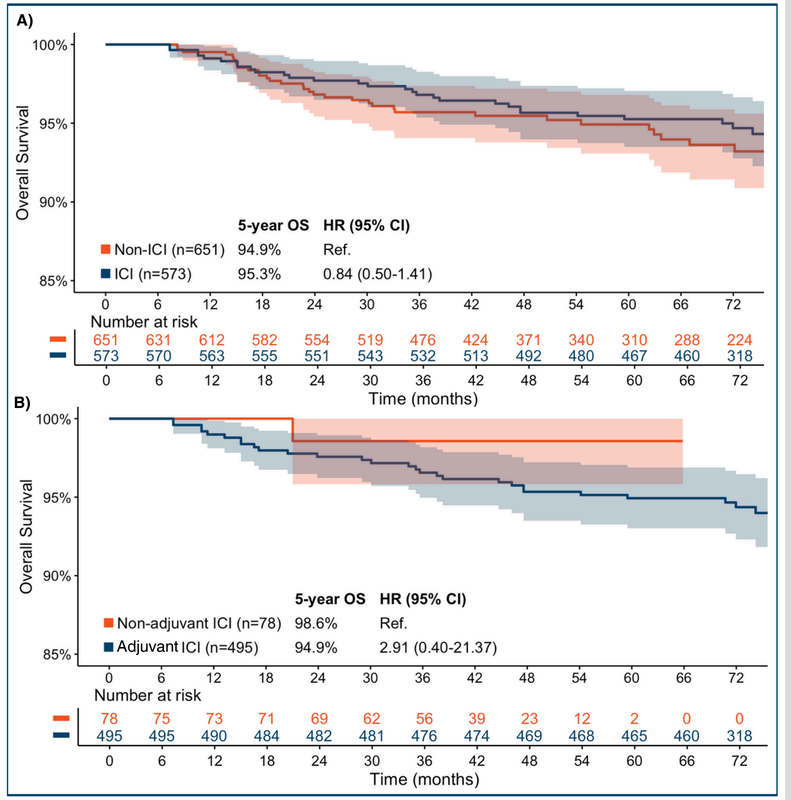


Figure 4. Pooled Kaplan–Meier curves of OS comparing: A) ICI vs. non-ICI; B) Adjuvant ICI vs. non-adjuvant ICI



CONCLUSION

- Neoadjuvant ICI-based regimens improve EFS in patients with early-stage TNBC beyond pCR.
- However, among patients who achieved pCR, EFS seems not to be impacted by the type of neoadjuvant chemotherapy used.

This presentation is the intellectual property of the author/presenter. Contact them at lisvravani@gmail.com for permission to reprint and/or distribute.

© Poster Template by Genigraphics® 1.800.790.4001 www.genigraphics.com