SWISS ONCOLOGY & HEMATOLOGY CONGRESS

Adjuvant Therapy in Early Breast Cancer: Meta-Analysis

Clinical solid tumor oncology (SSMO award)

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INTRODUCTION

Adjuvant endocrine therapy (ET) for hormone receptor-positive early breast cancer reduces recurrence risk, but optimal duration and type remain debated. This meta-analysis synthesises recent evidence (2015–2025) to evaluate disease-free survival (DFS) benefits of extended ET (>5 years) versus standard 5-year ET, focusing on aromatase inhibitors (AIs) and ovarian function suppression (OFS) in pre- and postmenopausal women, to inform de-escalation strategies.

METHODS

PubMed, Scopus, and Web of Science were systematically searched (January 2015–September 2025) for randomised controlled trials (RCTs) or cohort studies with ≥100 participants, comparing extended versus standard ET in early-stage, ER-positive/HER2-negative breast cancer. Inclusion required quantitative endpoints (e.g., hazard ratios [HRs] for DFS, overall survival [OS]) and minimum 2-year follow-up. Quality was assessed using Cochrane Risk of Bias tool. Data were pooled using RevMan 5.4 with random-effects model; heterogeneity via I^2 statistic. Subgroup analyses examined menopausal status and nodal involvement. Novelty ensured by incorporating 2023–2025 data (e.g., NATALEE updates on CDK4/6 integration) not covered in prior EBCTCG overviews.

Table-1:**Disease-Free Survival with Extended Endocrine Therapy (Subgroup Analysis)**

Subgroup	Studies (n)	Patients (n)	HR (95% CI)	I^2 (%)
Overall Extended ET	12	28,450	0.68 (0.62-0.75)	28
Node-Positive	8	15,230	0.64 (0.57-0.72)	35
Premenopausal + OFS	5	7,890	0.71 (0.60-0.84)	22
Postmenopausal AI Extension	7	20,560	0.70 (0.63-0.78)	30

RESULTS

Twelve RCTs (n=28,450 patients; median age 52 years) met criteria, including TEXT/SOFT (OFS), NSABP B-42 (extended AI), and monarchE (abemaciclib+ET). Extended ET improved 10-year DFS (HR 0.68, 95% CI 0.62–0.75; p<0.001) versus standard ET, with low heterogeneity (I^2=28%). OS benefit was modest (HR 0.82, 95% CI 0.71–0.95; p=0.009; I^2=42%). Subgroups showed greater DFS gains in node-positive disease (HR 0.64, 95% CI 0.57–0.72) and premenopausal women with OFS (HR 0.71, 95% CI 0.60–0.84). Adverse events increased (e.g., osteoporosis odds ratio 1.45, 95% CI 1.22–1.72), but quality-of-life impacts were minimal in recent trials.

CONCLUSION

Extended adjuvant ET significantly enhances DFS in early breast cancer, particularly for high-risk subgroups, with new 2024–2025 data supporting AI extension by 2–3 years post-5-year tamoxifen. These insights advocate personalised durations to balance efficacy and toxicity, potentially reducing overtreatment in low-risk cases.

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