

Vaginal Estrogen Does Not Elevate Recurrence Risk in Breast Cancer Survivors

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Introduction:

- More than 4 million breast cancer survivors currently reside in the US, and many treatment methods contribute to a patient developing genitourinary syndrome of menopause.
- Vaginal estrogen is highly effective in treating symptomatic genitourinary syndrome of menopause.
- Our objective was to assess the safety of vaginal estrogen in women with a history of breast cancer to see the association between vaginal estrogen use and breast cancer recurrence, breast cancer-specific mortality and overall mortality.

Methods:

- A systematic review and meta analysis was conducted utilizing studies that assessed patients with a history of breast cancer who used vaginal estrogen compared to those who did not use vaginal estrogen. These populations were assessed for risk of breast cancer recurrence, breast cancer mortality and overall mortality.
- Three reviewers independently extracted data into a standardized spreadsheet.
- Odds ratios (ORs) and 95% confidence intervals (CIs) were computed for categorical outcomes using a random-effects model. A two-sided P-value of <0.05 was deemed to be statistically significant.
- The fragility index (FI) was computed to assess the robustness of the summary effects.

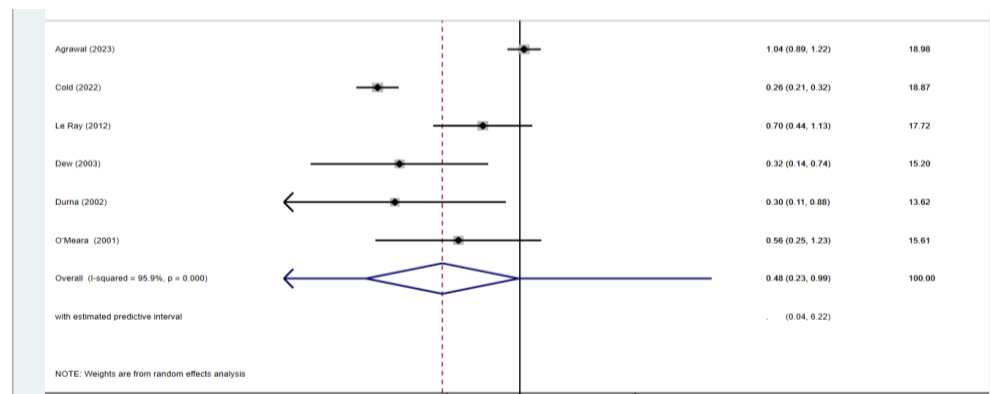
Pooled OR and Fragility Indices of Outcomes

Outcome	Vaginal Estrogen Therapy, n/N (%)	Control Group, n/N (%)	OR (95% CI)	P-value	FI/R FI	Heterogeneity, I ²
Breast Cancer Recurrence	520/4,494 (0.12)	3,086/19,566 (0.16)	0.47 (0.23-0.98)	0.04	1	95.90%
Breast Cancer Mortality	285/3,579 (0.12)	6,885/58,116 (0.12)	0.59(0.17-2.01)	0.40	69	98.20%
Overall Mortality	806/4684 (0.17)	12,869/55,040 (0.23)	0.45 (0.41-0.49)	0.00	16	0.00%

Results

- Of 4,881 articles identified, eight observational studies were included in this meta-analysis.
- Use of vaginal estrogen in patients with a history of breast cancer was not associated with an increased risk of breast cancer recurrence (six articles, 24,060 patients, odds ratio, 0.48; 95% confidence interval, 0.23-0.99).
- There was no increase in risk of breast cancer mortality (four articles, 61,695 patients, odds ratio 0.60; 95% confidence interval 0.17-2.02).
- There was no increase in overall mortality with use of vaginal estrogen in breast cancer survivors (five articles 59,724, odds ratio 0.45; 95% confidence interval 0.42-0.49).

Forest Plot for Breast Cancer Recurrence



Conclusion

- The use of vaginal estrogen in patients with a history of breast cancer does not appear to be associated with an increased risk of breast cancer recurrence, breast cancer-specific mortality, or overall mortality.