Factors associated with real world use of ovarian function suppression versus tamoxifen alone in premenopausal women with early-stage ER+Her2- breast cancer

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Background

The incidence of breast cancer in young women is rising and associated with a worse prognosis.

The SOFT and TEXT trials demonstrated that ovarian function suppression (OFS) combined with tamoxifen (tam) or aromatase inhibitor (AI) is more effective than tamoxifen alone in premenopausal women with ER+Her2- breast cancer, particularly in those at highest risk of recurrence.

Use of OFS may be limited by toxicity concerns and real world uptake is poorly understood.

Objectives and Methods

The Endeavor Health Cancer Registry was queried for women age < 50 with stage I-III, ER+HER2- breast cancer from 2012 to 2023.

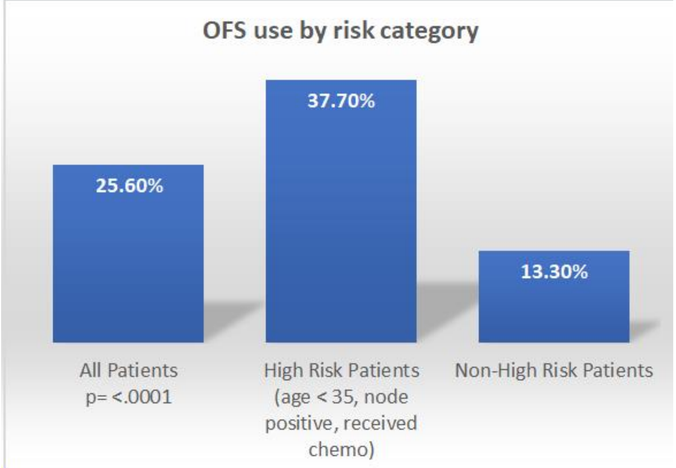
The goal of this study was to evaluate real world use of OFS in women < 50 years old in a large multidisciplinary community breast oncology center to investigate factors associated with use of OFS versus tam alone.

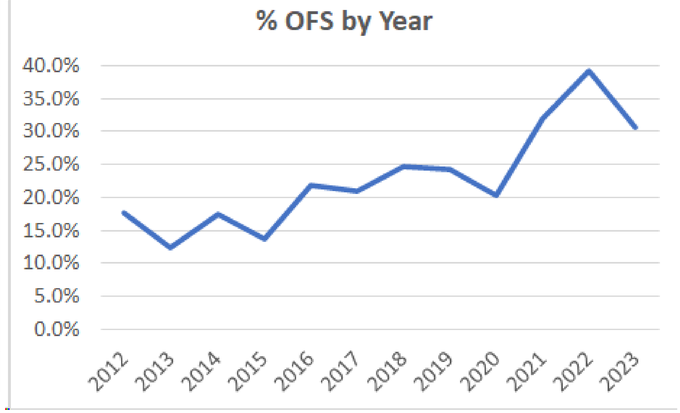
Use of OFS has increased over time but remains underutilized even in high risk premenopausal women with ER+Her2- breast cancer in the real world.

Results

Patient and Clinical Characteristics by OFS vs. Tamoxifen Alone

	All Patients	OFS	Tam Alone	p-value
Total Patients, N	723	185	538	-
Age Group				<.0001
< 30	9 (1.2)	3 (1.6)	6 (1.1)	
30 to 39	101 (14)	50 (27)	51 (9.5)	
40 to 49	613 (84.8)	132 (71.4)	481 (89.4)	
BMI [Mean ± SD]	26.9 ± 6.3	27.4 ± 7.0	26.7 ± 6.1	0.3866
Tumor Size Group [N (%)]				<.0001
< 2.0 cm	462 (63.9)	93 (50.3)	369 (68.6)	
2.0-2.9 cm	136 (18.8)	48 (25.9)	88 (16.4)	
≥ 3.0 cm	125 (17.3)	44 (23.8)	81 (15.1)	
Grade [N (%)]				0.0002
I	201 (27.8)	34 (18.4)	167 (31.0)	
II	387 (53.5)	101 (54.6)	286 (53.2)	
III	135 (18.7)	50 (27.0)	85 (15.8)	
Nodes Positive [N (%)]	243 (33.6)	104 (56.2)	139 (25.8)	<.0001
Chemotherapy [N (%)]	302 (41.8)	109 (58.9)	193 (35.9)	<.0001
Recurrence [N (%)]	64 (8.9)	13 (7.0)	51 (9.5)	0.3110





- Among 723 premenopausal women with early breast cancer, most high-risk women (62%) did not receive OFS therapy.
- Those treated with OFS were more likely to have larger tumors, positive lymph nodes, higher grade, and have received chemotherapy.
- A multivariable logistic regression analysis revealed age at diagnosis and grade were factors significantly associated with choosing tam alone as compared to OFS.
- Endocrine therapy was discontinued early due to toxicity in 14.5%
- Recurrence was not different between OFS and Tamoxifen groups when controlling for age, BMI, grade and stage (HR 0.12 (95% CI 0.60-2.09), p=0.7237) at a median follow up of 66 months.

Conclusions

Although data from the SOFT and TEXT trials support consideration of maximal hormone suppression with OFS in premenopausal women, our study highlights the underutilization of OFS, even in high-risk populations, in a real world setting.

Additional research is warranted to optimize patient selection, improve toxicity management, and increase uptake of OFS in the real world.