

Estrogen receptor-alpha, breast cancer patients and tamoxifen response

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Researchers have found evidence of a statistically significant survival benefit from adjuvant tamoxifen among patients whose estrogen receptor (ER)-positive tumors had high levels of phosphorylation of ER-alpha; at serine-118 (ER-alpha S118-P), according to a brief communication published online November 25 in the *Journal of the National Cancer Institute*.

Approximately 50% of breast carcinomas are resistant to [tamoxifen](#). Preclinical studies have shown that ER-alpha S118-P is required for response to tamoxifen.

Göran Landberg, M.D., Ph.D., of the Breakthrough Breast [Cancer](#) Research Unit, School of Cancer, Enabling Sciences and Technology at the University of Manchester, and colleagues evaluated data from 239 premenopausal patients with [breast cancer](#) who participated in a randomized trial of 2 years of adjuvant tamoxifen treatment vs. no systemic treatment. The association between recurrence-free survival and ER-alpha S118-P expression in tumor tissue was investigated.

Researchers found evidence of a statistically significant recurrence-free survival benefit from adjuvant tamoxifen, compared with no systemic treatment, among patients whose tumors had high ER-alpha S118-P expression (23.7 vs. 72.2 recurrences per 1000 person-years) but not among patients whose tumors had low expression (51.0 vs. 57.0 recurrences per 1000 person-years). ER-alpha S118-P was not associated with a benefit among untreated patients.

"Our study highlights the importance of assessing the functionality of a drug target," the authors write. "Future studies are necessary to evaluate whether ER-alpha S118-P expression is associated with tamoxifen response among post-menopausal patients."

Source: [Journal of the National Cancer Institute](#) ([news](#) : [web](#))

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