

Breast Cancer Extended Endocrine Therapy Algorithmic Tests

- I. The use of the breast cancer extended endocrine therapy test Breast Cancer Index (BCI) is considered **medically necessary** when:
 - A. The member is female (sex assigned at birth), **AND**
 - B. The member has primary breast cancer that is [ductal/NST](#), lobular, mixed or micropapillary, **AND**
 - C. The member's tumor is hormone receptor-positive (estrogen receptor-positive or progesterone receptor-positive), **AND**
 - D. The member's tumor is human epidermal growth factor receptor 2 (HER2)-negative, **AND**
 - E. The member has no distant metastases, **AND**
 - F. The member has completed at least 4 years of endocrine therapy, **AND**
 - G. The member is considering extended treatment with [adjuvant](#) therapy (e.g., tamoxifen, aromatase inhibitors, immunotherapy), **AND**
 - H. The member meets one of the following (regardless of menopausal status):
 1. Tumor is greater than 0.5 cm and node negative (pN0), **OR**
 2. Lymph nodes are pN1mi (2mm or smaller axillary node metastases), **OR**
 3. Lymph nodes are pN1 (1-3 positive nodes).
- II. The use of the breast cancer extended endocrine therapy test Breast Cancer Index (BCI) in men (sex assigned at birth) with breast cancer is considered **investigational**.
- III. The use of the breast cancer extended endocrine therapy test Breast Cancer Index (BCI) is considered **investigational** for all other indications.

RATIONALE AND REFERENCES

Breast Cancer Extended Endocrine Therapy Algorithmic Tests

National Comprehensive Cancer Network (NCCN): Breast Cancer (4.2025)

The BCI (Breast Cancer Index) is recommended by these guidelines for both indications of prognosis as well as predicting treatment for extended adjuvant endocrine therapy (p. BINV-N 1 of 5). Appropriate patients for this test include pre and postmenopausal women with HR positive, HER2 negative breast cancer (either ductal/NST, lobular, mixed, or micropapillary) (BINV-6, BINV-7, BINV-8).

Postmenopausal breast tumors must be one of the following:

- 0.5 cm or larger
- pN1mi (2 mm or smaller axillary node metastases)
- pN1 (1–3 positive nodes) (p. BINV-6, BINV-N 1 of 5).

Premenopausal tumors must be one of the following:

- 0.5 cm or larger and pN0 (p. BINV-7)
- pN1mi (2 mm or smaller axillary node metastasis) (BINV-8)
- pN1 (1–3 positive nodes) (BINV-8).

NCCN guidelines also state that there is limited data regarding the use of these tests in males with breast cancer who are being considered for chemotherapy (p. BINV-J 1 of 2).

National Comprehensive Cancer Network (NCCN). NCCN Clinical Practice Guidelines in Oncology: Breast Cancer 4.2025 https://www.nccn.org/professionals/physician_gls/pdf/breast.pdf

American Society of Clinical Oncology (ASCO)

In 2022, ASCO issued a guideline regarding the use of Breast Cancer Index testing for extended endocrine therapy for ER-positive HER2-negative breast cancer. They recommend consideration of the Breast Cancer Index (BCI) test for either node-negative cancer or cancer with 1-3 positive nodes, which has been treated with primary endocrine therapy for 5 years with no evidence of recurrence (Recommendation 1.24., p. 1819).

The guideline cites a lack of sufficient evidence for the BCI test to guide decisions about extended endocrine therapy in individuals with node-positive breast cancer with 4 or more positive nodes following 5 years of endocrine therapy (Recommendation 1.25, p. 1819).

Andre F, Ismaila N, Allison KH, et al. Biomarkers for Adjuvant Endocrine and Chemotherapy in Early-Stage Breast Cancer: ASCO Guideline Update [published correction appears in J Clin Oncol. 2022 Aug 1;40(22):2514]. J Clin Oncol. 2022;40(16):1816-1837. doi:10.1200/JCO.22.00069

DEFINITIONS

1. **ABCDE feature** is an acronym for examining patients with a lesion that is suspicious for melanoma: **a**symmetry, **b**order irregularity, **c**olor variegation, **d**iameter greater than 6 mm, and **e**volution.
2. **Adjuvant** therapy is a medication (such as chemotherapy or endocrine therapy) given after the surgical removal of a cancerous tumor.
3. **Ductal/NST** is a ductal breast cancer of no special type (NST), meaning the cancer cells have no features that classify them as a specific type of breast cancer when examined by microscope.
4. **Indeterminate cytologic findings** include Bethesda diagnostic category III (atypia/follicular lesion of undetermined significance) or Bethesda diagnostic category IV (follicular neoplasm/suspicion for a follicular neoplasm)