Guidelines are not meant to replace clinical judgment or professional standards of care. Clinical judgment must take into consideration all the facts in each individual and particular case, including individual patient circumstances and patient preferences. They serve to inform clinical judgment, not act as a substitute for it. These guidelines were developed by a Review Organization. These guidelines may be disclosed only for the purposes of the Review Organization according to Minn. Statutes §145.64 and are subject to the limitations described at Minn. Statutes §145.65.
**PICO (TS) Framework**

**Population:** Breast cancer patients

**Intervention:** Ordering of Oncotype DX Assay Testing for treatment by treating physician

**Comparison:** NA

**Outcomes:** Ensure Oncotype DX Assay Testing is performed in appropriate patients at the right interval

**Timing:** After breast cancer diagnosis.

**Setting:** Outpatient; Oncology

**CLINICAL PRACTICE GUIDELINES:**

1. When ordered, the Oncotype DX should be performed no less than 14 days after discharge from an Allina hospital.
2. Oncotype DX may be ordered by the treating physician, after discussion with the patient.
3. Oncotype DX is recommended in patients with stage: pT1b, pT1c, pT2, pT3 and N0 or N1(mi)
4. Oncotype DX is also to be considered in select patients with 1-3 positive axillary lymph nodes
5. In patients with multiple tumors:
   a. If the tumors are histologically and phenotypically similar (in regards to type, grade, and hormone expression), only the larger tumor should be sent for Oncotype DX testing.
   b. If the tumors are histologically different, attempts should be made to determine if testing is necessary on more than one tumor. The larger and/or higher grade tumor is generally the best choice for Oncotype DX testing. (suggested by pathology)
6. Oncotype DX should not be ordered in ER negative, HER2 positive tumors, or stage IV
7. In patients with DCIS there is currently (2017) insufficient evidence to recommend performing Oncotype DX to guide treatment decisions

**SUPPORTING EVIDENCE:**

Although the current NCCN guidelines do not mandate the use of molecular gene expression assays such as Oncotype DX, based on the increasing body of evidence, it is suggested as an additional prognostic/predictive test that can be considered in certain subsets of patients to aid in decisions regarding the benefit of adjuvant chemotherapy (1).

As of 2017, based on the available data, the NCCN Panel Members believe that that the 21-gene assay (Oncotype DX) is the most validated multigene assay to predict who is most likely to respond to systemic chemotherapy.
The 21-gene assay (Oncotype DX) is among the best validated prognostic and predictive gene assays. Patients with a high risk score (>31) clearly benefit from chemotherapy, whereas patients with a low risk score (<18) do not appear to benefit from the addition of chemotherapy, regardless of the number of positive lymph nodes (5). Multiple studies have shown that the 21-gene assay recurrence score is predictive of recurrence in postmenopausal women treated with Tamoxifen or Aromatase inhibitors (2, 3, 4, 5, 6, and 7). The Oncotype DX recurrence score has also shown to predict response to adjuvant chemotherapy (5,6,7), regardless of the number of axillary lymph nodes involved, although the largest studies in node positive patients were retrospective (5,7). The TAILORx study showed prospectively that patients with a low risk recurrence score (<11) do not benefit from chemotherapy, as their 5-year risk of systemic recurrence without receiving chemotherapy was 1% (13).

The additional benefit from adjuvant chemotherapy in addition to endocrine therapy in patients with an intermediate Recurrence Score (18-25) is currently still unclear. The TAILORx study is prospectively collecting that information (13). The ongoing RxPONDER trial is evaluating whether adjuvant chemotherapy is beneficial in patients with hormone receptor positive, HER-2 negative breast cancer with positive axillary nodes and a recurrence score of 25 or less (14).

We believe that the decision to order Oncotype DX or other molecular predictive assay, should be made in conjunction with the discussion of the short and long term toxicity risks of chemotherapy, therefore should be deferred to the Medical Oncologist and involve the participation of the patient.

**DEFINITIONS:** N/A

**SPECIAL ENTITIES:** N/A

**FORMS:** N/A

**ALGORITHM:** N/A

**EXCEPTIONS:** N/A

**ADDENDUM: Plan for Monitoring and Adherence**

**Who** will be measured for guideline adherence?

- Physicians

**Where** is the data located?

- EDW/Tumor registry

**How** will the guideline adherence be monitored?

- It will be monitored through the Breast Program Committee

**What** will be measured?

- % patients getting inappropriate Oncotype DX
- % Candidates for Oncotype DX receiving test
- % Candidates for Oncotype DX not tested but receiving chemo

**When** will adherence data be collected?

- A minimum of yearly

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REFERENCES:


13. Clinical trial underway: Hormone therapy with or without combination chemotherapy in treating women who have undergone surgery for node negative breast cancer (the TAILORx trial), Clinical trial ID: NCT00310180. Available at: http://clinicaltrials.gov/ct2/show/NCT00310180?term=TAILORx&rank=2

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