DOCUMENT TITLE: Breast Cancer – Diagnosis and Staging
SOURCE: National Cancer Institute (NCI)
DOMAIN: Oncology – Breast Cancer Diagnosis
LANGUAGE: English
DOCUMENT TYPE: Diagnostic and Staging Overview
CLINICAL CONTEXT: Diagnostic decision support (non-therapeutic)

OVERVIEW OF BREAST CANCER DIAGNOSIS

Breast cancer diagnosis begins when symptoms or screening test results suggest the presence of disease.

Diagnosis involves:
- Medical history assessment
- Physical examination
- Diagnostic tests

INITIAL CLINICAL EVALUATION

Doctors may:
- Review personal and family medical history
- Perform a clinical breast examination to detect lumps or abnormalities

IMAGING TESTS FOR BREAST CANCER

Imaging tests used in diagnosis include:

- Diagnostic mammography
- Breast ultrasound
- Breast MRI

These tests help identify abnormal areas that require further evaluation.

BIOPSY FOR BREAST CANCER

A biopsy is the only definitive method to diagnose breast cancer.

During a biopsy, tissue or cells are removed and examined by a pathologist.

TYPES OF BREAST BIOPSY

Types of biopsy include:
- Fine-needle aspiration biopsy
- Core-needle biopsy
- Image-guided biopsy
- Surgical biopsy

Surgical biopsies may be:
- Incisional
- Excisional

PATHOLOGY REPORT

The pathology report provides information on:
- Tumor origin (ducts or lobules)
- Tumor grade
- Whether the cancer is invasive

BIOMARKER TESTING

Breast cancer cells are tested for biomarkers, including:
- Estrogen receptor (ER)
- Progesterone receptor (PR)
- HER2

Biomarker results are used to determine stage and guide treatment planning.

STAGING OF BREAST CANCER

Staging determines how far breast cancer has spread.

Staging considers:
- Tumor size
- Lymph node involvement
- Distant metastasis
- Biomarker results
SENTINEL LYMPH NODE BIOPSY

A sentinel lymph node biopsy identifies whether cancer has spread to nearby lymph nodes.

The sentinel node is the first lymph node likely to be affected by cancer spread.
IMAGING TESTS FOR STAGING

Imaging tests for staging may include:
- CT scan
- Bone scan
- PET or PET-CT scan
TUMOR GRADE

Tumor grade describes how abnormal cancer cells appear under a microscope.

Grades range from:
- Grade 1 (well differentiated)
- Grade 2 (moderately differentiated)
- Grade 3 (poorly differentiated)
MULTIGENE TESTING

Multigene tests analyze gene activity in cancer cells to predict recurrence risk.

Examples include:
- Oncotype DX
- MammaPrint
- Breast Cancer Index
GENETIC COUNSELING AND TESTING

Genetic testing identifies inherited mutations such as:
- BRCA1
- BRCA2

Genetic counseling helps patients understand testing implications.
PATIENT SUPPORT CONSIDERATIONS

Waiting for test results can be stressful.
Second opinions may help confirm diagnosis and treatment planning.
DOCUMENT SCOPE

This document provides educational information on breast cancer diagnosis and staging.
It does not replace medical advice.