

Understanding a Pathology Report

A breast cancer pathology report is the lab report that explains **what was found in the biopsy or surgery tissue**. It is written by a pathologist and is one of the main documents your care team uses to decide treatment. The most important parts usually include the cancer **type**, whether it is **in situ or invasive**, the **grade**, the **size**, whether cancer is at the **margins**, whether lymph nodes are involved, and the tumor markers such as **ER, PR, and HER2**.

Here is the easiest way to understand it:

1. Start with the final diagnosis

This section usually tells you the main name of the cancer, such as **ductal carcinoma in situ (DCIS)**, **invasive ductal carcinoma / invasive carcinoma of no special type**, or **invasive lobular carcinoma**. “In situ” means the abnormal cells are still confined to where they started. “Invasive” means the cancer has grown beyond that original area into nearby breast tissue.

2. Check the tumor grade

Grade is different from stage. **Grade** describes how abnormal the cancer cells look under the microscope and how quickly they may be growing. In breast cancer this is often the **Nottingham grade**:

- **Grade 1** = looks more like normal cells, usually slower growing
- **Grade 2** = intermediate
- **Grade 3** = looks less like normal cells, often faster growing

3. Look for ER, PR, and HER2

These are key treatment markers for **invasive** breast cancer.

- **ER-positive** means the cancer has estrogen receptors
- **PR-positive** means it has progesterone receptors
- **HER2-positive** means it has too much HER2 protein or too many copies of the HER2 gene

These results matter because they help determine whether the cancer may respond to **hormone therapy** or **HER2-targeted therapy**. Triple-negative breast cancer means **ER-, PR-, and HER2-negative**.

4. Find the tumor size

The report may list the size in **millimeters or centimeters**. This helps with staging, but size alone does **not** tell the whole story. Stage also depends on lymph nodes, spread, grade, and biomarker status.

5. Review the margins

If tissue was removed during surgery, the report may describe whether the **margins** are clear. A negative or clear margin generally means no cancer cells were seen at the outer edge of the removed tissue. A positive margin means cancer cells are present at the edge, which may mean more treatment or surgery is needed.

6. Check lymph nodes

If lymph nodes were sampled, the report may say whether cancer was found in them and how many were involved. This is important because lymph node status helps determine stage and treatment planning.

7. Notice other terms that may appear

You may also see:

- **Lymphovascular invasion (LVI):** cancer seen in small blood vessels or lymph channels near the tumor
- **Ki-67:** a marker of how actively cells are dividing
- **Multifocal / multicentric:** more than one area of cancer in the breast
- **Necrosis, calcifications, or microcalcifications:** tissue features that may be mentioned in the report

8. Remember that stage may not be on the first biopsy report

A biopsy report often gives the diagnosis and biomarker information, but the **full pathologic stage** may only be determined after surgery, when the full tumor and lymph nodes can be examined. Breast cancer staging uses **TNM** plus grade and biomarker status.

A simple way to read your report is to answer these 7 questions:

1. What is the exact name of the cancer?
2. Is it **in situ** or **invasive**?

3. What is the **grade**?
4. What are the **ER, PR, and HER2** results?
5. How large is it?
6. Are the **margins** clear?
7. Are any **lymph nodes** involved?

A few important cautions: a pathology report is highly technical, and one line by itself can be misleading. For example, **grade is not the same as stage**, and a biopsy may not contain every detail that will appear in the final surgical pathology. Your oncologist or breast surgeon usually interprets the report together with imaging, exam findings, and any additional testing.

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