

How to Read Your Pathology Report *(continued)*

2 Gross Description

The **gross description** describes how a specimen looks to the “naked eye” and details what portions of the specimen selected are examined under the microscope. It includes the size, color, number of tissue samples, and, when appropriate, weight of the specimen. A gross description of a small biopsy specimen is typically short. However, a more complex specimen, such as a cancer resection specimen, will have a more detailed description.

The pathologist uses his or her training and experience to select areas of the specimen that should be sampled for microscopic examination or special studies. Usually, if there are multiple tissues or organs in the specimen, each is described and sampled. Even for a single organ, different portions of the organ are often selected for microscopic examination, including areas that look abnormal as well as areas that look normal to the naked eye. Each of these samples is used to make a microscope slide and will be listed in your pathology report.

For a specimen that contains cancer, the pathologist uses specific guidelines when examining the specimen and sampling it for microscopic slides. These vary depending on the location and the type of the cancer.

3 Microscopic Description

The **microscopic section** details how the specimen looks under the microscope and how it compares with normal cells. It also describes if the cancer has invaded nearby tissues. Pathologists always perform the microscopic evaluation of a specimen, even if the final pathology report does not include a written description.

Using specially equipped microscopes and permanent inks applied to specimens, the pathologist can provide detailed and precise measurements, which are valuable because tumor cells may be present beyond what the naked eye can see. Able to measure distances as small as one-tenth of a millimeter, the pathologist can determine if the tumor has been completely removed and how far the tumor is from the margin of the surgically excised tissue. This information helps guide future treatment.

The microscopic description is then used, along with the gross description and your clinical history, to make the pathologic diagnosis and to ensure that the other members of your medical team have the most complete and accurate information to construct your treatment and follow-up plan.

The pathologist also uses the microscopic description to note small incidental findings that may not be important to the patient’s care, but they may be of interest to other pathologists who may see the case. The microscopic description is also used to document the results of special studies that may have been used to reach the diagnosis and exclude other diagnoses.

4 Diagnosis Section

The **diagnosis section** provides the final pathology diagnosis that is established after thorough examination of the specimen. The pathologist is the medical doctor who makes this diagnosis. Some diagnoses are very short, such as “acute appendicitis.” Cancer diagnoses may be lengthy as they need to describe many aspects that will affect the patient’s treatment and outcome. For most cancers, the diagnosis will include the grade of the tumor. The grade is determined by applying specific criteria to the microscopic features of the tumor. The grade may also provide prognostic information and may guide treatment.

5 Synoptic Report

In cancer resection cases, there will be a special cancer case summary or **synoptic report**. The synoptic report lists all of the most important findings in the case, summarized as one concise table. The specific items listed in this summary are those that a panel of cancer experts has determined to be essential to cancer treatment. All this information helps

determine which additional treatments or testing, if any, are needed, and helps predict how the patient will do over time (outcome). Pathology staging information is also provided in the synoptic report. Staging information details how extensive the tumor is and if it has spread beyond the organ in which it originated. This information directly affects subsequent treatment and helps to predict prognosis.

Comment Section

Sometimes there are diseases that are subtle and difficult to diagnose, or the disease process is considered controversial or unclear. Many pathologists tend to use the **comment section** to explain these types of issues and recommend possible additional testing.

Some pathology reports also contain additional data such as images, molecular studies, references, Internet links, and addendum information, all of which help the care team formulate the best possible treatment plan for the patient.

