

How to Read Your Pathology Report

Our team at Eastern Connecticut Pathology Consultants (ECPC) created this guide to help you understand your pathology report and the role of your pathologist on your care team.

What is a Pathologist?

A pathologist is a medical doctor who specializes in the diagnosis of many diseases, including cancer, by examining tissue samples from the body. Your pathologist is an integral member of your health care team with a key role in diagnosis and even the development of treatment plans.

After examining a tissue sample, your pathologist will often determine whether your condition is *benign*, *malignant* or *pre-malignant*.

- **Benign:** Non-cancerous cells that do not spread
- **Malignant:** Cancerous cells that can spread to other tissues and organs
- **Pre-malignant:** Pre-cancerous cells that are likely to develop into cancer and require monitoring

Biopsy & Tissue Samples: What Happens Next

Your doctor or surgeon may remove tissue samples and/or cells from your body during a biopsy, surgical procedure or blood draw. Your doctor places the tissue sample(s) into a special container marked with your unique patient identifiers – such as name, date of birth and medical record number – and sends them to the pathology laboratory. In the lab, a trained lab professional called a histotech prepares glass slides from your tissue sample(s) so they can be examined by the pathologist under a microscope. Your pathologist will communicate the diagnosis to your medical team in a detailed surgical pathology report.



From Biopsy to Pathology Lab

Most pathology reports are complete within 24 to 48 hours. Learn what happens to your tissue as it moves through the laboratory:



1 TISSUE FIXATION

After a biopsy or surgery, your tissue sample is preserved with a chemical fixative in a container with your name, date of birth and medical record number and then delivered to the laboratory. There, we register your sample and label it with a unique specimen number.



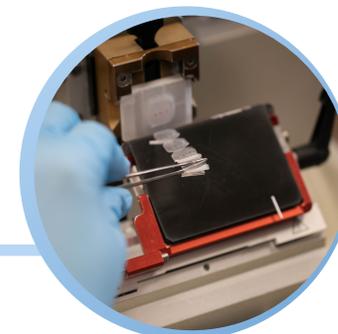
2 GROSS EXAMINATION

A pathologist or pathologists' assistant carefully removes the sample from the fixative and thoroughly examines it, making notes of its size, shape and any important characteristics.



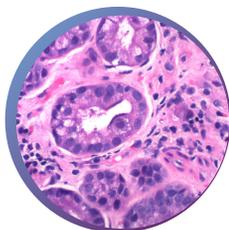
3 TISSUE PROCESSING

The tissue will be further evaluated under a microscope. First the tissue is placed in small containers called *cassettes*, where they are exposed to chemicals to harden. Next, a trained laboratory professional called a histotechnologist embeds the sample in paraffin wax to form a tissue block.



4 MAKING A SLIDE

The histotechnologist uses a tool called a microtome to slice extremely thin sections of the specimen. These slices are placed on slides and stained so they will be visible under the microscope.



5 THE PATHOLOGIST

A type of medical doctor called a pathologist examines the slide under a microscope and prepares a thorough pathology report with his or her findings.

Understanding Your Pathology Report

Your surgical pathology report is customized to you and your diagnosis. Each section contains information necessary for you and your doctor to make informed treatment decisions:



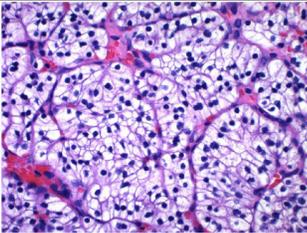
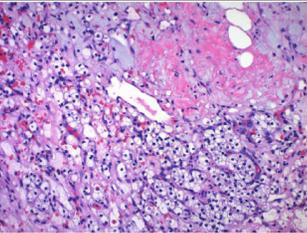
Surgical Pathology
Accession #: S19-1111

Patient Name: DOE, JOHN	Client: MMH	Collected: 9/1/2019
DOB: 10/13/1935 (Age: 83)		Received: 9/1/2019
Gender: M	MR #: 123456	Pt. Type: Referred
Physician(s): ED Physician	Acct #: 12345678	Location: MLNPLAB
Path Registry File		
Tumor Registry		

Final Diagnosis

Left kidney, nephrectomy:
-Clear cell renal cell carcinoma (11.2 cm in greatest dimension), Fuhrman nuclear grade 2 (of 4)
-Carcinoma invades perinephric and renal sinus fat
-Carcinoma invades a muscularized/segmental branch of the left renal vein
-Renal artery, renal vein, and distal ureter resection margins are negative for carcinoma
-See Microscopic Description and Data Synopsis

Elizabeth Rinehart, M.D.
Electronic Signature 9/18/2019



Left kidney: Clear cell renal cell carcinoma. Left kidney: Clear cell renal cell carcinoma.

Clinical Diagnosis
Left renal mass

Microscopic Description
Histologic sections of the left radical nephrectomy specimen demonstrate a clear cell renal cell carcinoma measuring up to 11.2 cm in greatest dimension. The tumor is located in the superior pole, is unifocal, and extends to the inferior aspect of the specimen. The neoplasm is comprised of large sheets and nests of malignant epithelial cells with voluminous clear cytoplasm. The nuclei of the tumor cells are moderately enlarged with small but focally prominent

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Diplomates of American Board of Pathology | Fellows of the College of American Pathologists:

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Thomas Buck, M.D. – Michele B. Conlon, M.D. – Angela Fields, M.D., Ph.D. – Susan Gobel, M.D., Ph.D. – Michael Hitchcock, M.D.
Bela Horvath, M.D., Ph.D. – Devbala S. Patel, M.D. – Aneta Rafalowski, M.D. – Ronald Rice, M.D., Ph.D. – Elizabeth Rinehart, M.D.
Robert A. Schwartz, M.D. – Monica Stooden, M.D. – Anshu Trivedi, M.D.

Patient Identifiers

Includes your unique patient identifiers such as name, date of birth and medical record number

These identifiers will be checked multiple times to track your specimen in the lab and to ensure accuracy.

Final Diagnosis

Includes information about your diagnosis and tumor grade if there's a cancer diagnosis

The *grade* (low, intermediate or high) describes how abnormal your cells look under a microscope compared to non-cancerous cells.

Photomicrographs

Demonstrates photos of your cells taken through the microscope

Clinical Diagnosis

Summarizes important aspects of your medical background, often provided by your doctor

Microscopic Description

Describes how your tissue looks under the microscope

This section provides valuable information to your doctor and other pathologists who may review your case, such as:

- How close cancer cells are located to the margin (edge of the tissue sample)
- Whether the cancer is likely to spread to other parts of the body (metastasize)

If you have had surgery, your pathologist will determine whether a tumor has been completely removed.

What Happens After a Cancer Diagnosis?

At Eastern Connecticut Pathology Consultants (ECPC), we require that a second pathologist review all new cancer diagnoses.

For rare or challenging cases, many pathologists will review your tissue slides and discuss your unique symptoms and medical history with a team of specialists working on your treatment plan.

This collaborative approach allows us to:

- Confirm your diagnosis
- Determine the best, most up-to-date treatment options for your condition

Additional Testing Options

Depending on the complexity of your diagnosis, your doctor may recommend additional testing to determine the cancer subtype and whether it will respond to certain medications, chemotherapies or other treatments.

Various molecular or genetic testing may:

- Help guide the next steps of your treatment
- Predict your chance of recovery
- Determine whether your family members should be tested for certain diseases

In many instances, your pathologist may identify tumor characteristics that would allow you to benefit from targeted therapies.



ECPC is an independent practice comprised exclusively of board-certified and subspecialty-trained pathologists with decades of experience and a broad range of expertise.