Chapter Nine

LABORATORY AND PATHOLOGY SECTION

Laboratory procedures and pathology procedures can be found in the coding series 80047-89398. A laboratory is defined as a facility that provides controlled conditions in which scientific research, experiments, and measurement may be performed. Lab procedures are composed of laboratory processes and analytical tests consistent with validated standard testing techniques. The procedures in this section are performed in a lab setting.

Pathology is the study and diagnosis of disease using organ and tissue specimens. Cytopathology is the study and diagnosis of disease using cellular specimens.

The lab and pathology procedures are organized and reported by similar test categories. The divisions are as follows:

- 80047-80076 Organ or Disease Oriented Panels
- 80100-80104 Drug Testing
- 80150-80299 Therapeutic Drug Assays
- 80400-80439 Evocative/Suppression Testing
- 80500-80502 Consultations (Clinical Pathology)
- 81000-81099 Urinalysis
- 81105-81479 Molecular Pathology
- 81490-81599 Multianalyte Assays with Algorithmic Analyses
- 82009-84999 Chemistry
- 85002-85999 Hematology and Coagulation
- 86000-86849 Immunology (Serology)
- 86850-86999 Transfusion Medicine
- 87003-87999 Microbiology
- 88000-88099 Anatomic Pathology
- 88104-88199 Cytopathology
- 88230-88299 Cytogenic Studies
- 88300-88399 Surgery Pathology
- 88720-88749 In Vivo Laboratory Procedures
- 89049-89240 Other Procedures
- 89250-89398 Reproductive Medicine Procedures
- 0001U-0061U Proprietary Lab Analyses

Panel codes are codes that describe specific individual lab tests reported within one code "panel". Lab panel codes are reported in code series 80047-80076. When reporting a panel code, the individual tests within the "panel" cannot be reported separately when all tests are performed within the panel. If just one procedure included in the panel is not performed, then the panel code may not be utilized and all of the lab procedures performed must be reported individually.

Example: Dr A orders the following laboratory procedures for Ethel: Calcium, Carbon Dioxide, Chloride, Creatinine, Glucose, Potassium, Sodium, and BUN.

The codes listed above are all inclusive of the Basic metabolic panel and therefore, is reported utilizing one single code, 80048.

If Dr A ordered all tests above with the exception of the BUN, the service would be reported with each individual code within the panel that the physician performed. Therefore, the encounter would be coded as follows: 82310, 82374, 82435, 82565, 82947, 84132, and 84295.

Panel codes that have tests overlapping two different panels should be reported with just one panel code and the panel code that contains the majority of single code combinations should be reported. For example, if a Comprehensive Metabolic Panel is reported, a Basic Metabolic Panel may not be reported. Instead the panel that covers the greater number of individual tests should be reported and additional single tests should be reported to encompass all procedures performed.

Drug testing codes are reported by drug class or individual drug test. Qualitative and quantitative methods may be utilized. **Qualitative** drug tests indicate the drug type only. **Quantitative** drug test reveals the drug type and measures the amount of the drug in one's system.

Molecular pathology is the study and diagnosis of disease using molecular (molecules) specimens. These procedures are reported in code series 81200-81479. Key areas included in molecular pathology include, but are not limited to, the following categories:

- Diagnosis of genetic diseases
- Cancer genetics and monitoring
- Carrier screening/prenatal diagnosis
- Identification of microbiological agents and viral load
- Forensics/Human identity testing
- Research and development

Tier 1 molecular pathology procedures are used to define specific genes and DNA genetic sequence. Tier 2 molecular pathology procedures are used to report lower volumes where the incidence of the genetic disease is rarer than in the Tier 1 genetic diseases being reviewed. The Tier 2 procedures are reported by gene and by technique used.

When molecular procedures require **independent interpretation** by a physician, modifier -26 should be appended to the procedure code where the description in the procedure code does not include "interpretation and report".

In 2013, additional molecular pathology codes were added to report **Multianalyte Assays with Algorythmic Analyses** (MAAA). MAAA's combine results of multiple assay types and other patient information to provide an analysis of overall numeric probability of risk of a potential abnormality.

Code descriptions include disease type, material analyzed, number of markers (genes, proteins), methodology, number of functional domains (if needed), specimen type (blood, tissue), algorithm result type (diagnostic) and report (risk score/results).

Chemistry procedures are performed to determine the chemical composition of substance or body. These procedures are reported using code series 82009-84999.

Clinical information and calculation values derived from test results are not reported separately as they are considered part of the performance of the test (i.e.: independent interpretation above and beyond the result determination).

Hematology (blood) **and coagulation** (lumping of liquid substances) procedures are reported in code series 85002-85999. These tests may be performed and reported **manually** or by **automated** means.

Immunology is the study and diagnosis of the immune system and are reported using code series 86000-86804. These tests may be performed by quantitative, semiquantitative or qualitative method.

Blood transfusion medicine procedures are reported in code series 86850-86999. These procedures describe blood typing, antibody screening and compatibility testing procedures for blood.

Microbiology procedures include testing related to microorganisms and are reported within code series 87003-87999. These procedures include the following microorganism categories:

- Bacteriology – study of bacteria
- Mycology – study of fungi
- Parasitology – study of parasitic organisms
- Virology – study of infections caused by virus

Anatomic pathology procedures are reported for the physician services only (professional component/interpretation and report). Pathology procedures may be performed by gross, microscopic or gross and microscopic exam. A **gross** exam is reported when the physician examines the specimen with the bare eye. A **microscopic** exam is when the physician examines the specimen using a microscope.

Anatomic pathology procedures are categorized as follows:

- Postmortem Exams (autopsy) are reported using code series 88000-88099.
- Cytopathology procedures are reported using code series 88104-88199.

Cytogenetic studies are performed for the study of the structure and function of cells, especially the chromosomes within the cells. The below images are cytogenetic studies using fluorescent in situ hybridization (FISH).

Surgical pathology section is utilized to report specimens removed during surgery that require a gross and/or microscopic exam. When the pathologist performs only a **gross** exam of a surgical specimen, code 88300 is utilized to report the service. The site of the specimen is irrelevant to the code assignment.

When the pathologist performs a **gross and microscopic exam**, the service is reported utilizing various levels, which describe the *type* of specimen taken and the *location* of the specimen. For example, if a physician performs a gross and microscopic exam on a breast lump without performing surgical margins, the service would be reported with code 88305.
When performing **surgery pathology procedures**, the exam and report for the specimen are included in the pathology level of service. Any additional services beyond the examination of the specimen and the interpretation and report of the results of the exam should be reported separately using code series 88311-88365. Examples of these additional

services include, but are not limited to, decalcification, staining, cytologic examination, and FISH procedures.

In vivo laboratory procedures are medical test, experiment or procedure that is done on a living organism, such as a laboratory animal or human. In vivo procedures that are performed in a test tube or laboratory dish are reported in code series 88720-88749.

Reproductive medical procedures are reported within code series 89250-89398 and include sperm count, insemination of embryos and cryopreservation procedures.

Proprietary Lab Analyses appeared for the first time in the AMA CPT 2018 code set. The codes are used by laboratories who want to define more specifically the proprietary lab that their facility is performing. These labs are reported utilizing code series 0001U-0061U. These codes may be reported if:

- The test is commercially available in the US for use on humans, and
- The clinical lab or manufacturer offering the test requested a specific code to report the lab procedure.

A full list of these codes can be found in Appendix O of the CPT book.

CPT modifiers utilized for Pathology and Laboratory services are 22, 26, 32, 52, 53, 59, 90, and 91.

In physician practices, there are specific lab tests that may be performed within an office setting. These tests fall under the Clinical Laboratory Improvement Amendments (CLIA).

The FDA defines the **Clinical Laboratory Improvement Amendments (CLIA)** as the regulation of laboratory testing that requires clinical laboratories to be certificated by their state as well as the Center for Medicare and Medicaid Services (CMS) before they can accept human samples for diagnostic testing. Laboratories can obtain multiple types of CLIA certificates, based on the kinds of diagnostic tests they conduct.

There are three federal agencies responsible for CLIA: The Food and Drug Administration (FDA), Center for Medicaid Services (CMS) and the Center for Disease Control (CDC). Each agency has a unique role in assuring quality laboratory testing.

When reporting lab tests performed in the office setting that have certification as CLIA waived tests, the lab procedure should be reported with modifier QW.

For more information on CLIA and PPM Waived Testing visit the Centers for Disease Control and Prevention (CDC) website at https://wwwn.cdc.gov/clia/Resources/WaivedTests/

Lung Biopsy Pathology Report

Description: Lung, wedge biopsy right lower lobe and resection right upper lobe. Lymph node, biopsy level 2 and 4 and biopsy level 7 subcarinal. PET scan demonstrated a mass in the right upper lobe and also a mass in the right lower lobe, which were also identified by CT scan.
(Medical Transcription Sample Report)

CLINICAL HISTORY: A 48-year-old smoker found to have a right upper lobe mass on chest x-ray and is being evaluated for chest pain. PET scan demonstrated a mass in the right upper lobe and also a mass in the right lower lobe, which were also identified by CT scan. The lower lobe mass was approximately 1 cm in diameter and the upper lobe mass was 4 cm to 5 cm in diameter. The patient was referred for surgical treatment.

SPECIMEN:
A. Lung, wedge biopsy right lower lobe
B. Lung, resection right upper lobe
C. Lymph node, biopsy level 2 and 4
D. Lymph node, biopsy level 7 subcarinal

FINAL DIAGNOSIS:
A. Wedge biopsy of right lower lobe showing: Adenocarcinoma, Grade 2, Measuring 1 cm in diameter with invasion of the overlying pleura and with free resection margin.
B. Right upper lobe lung resection showing: Adenocarcinoma, grade 2, measuring 4 cm in diameter with invasion of the overlying pleura and with free bronchial margin. Two (2) hilar lymph nodes with no metastatic tumor.
C. Lymph node biopsy at level 2 and 4 showing seven (7) lymph nodes with anthracosis and no metastatic tumor.
D. Lymph node biopsy, level 7 subcarinal showing (5) lymph nodes with anthracosis and no metastatic tumor.

COMMENT: The morphology of the tumor seen in both lobes is similar and we feel that the smaller tumor involving the right lower lobe is most likely secondary to transbronchial spread from the main tumor involving the right upper lobe. This suggestion is supported by the fact that no obvious vascular or lymphatic invasion is demonstrated and adjacent to the smaller tumor, there is isolated nests of tumor cells within the air spaces. Furthermore, immunoperoxidase stain for Ck-7, CK-20 and TTF are performed on both the right lower and right upper lobe nodule. The immunohistochemical results confirm the lung origin of both tumors and we feel that the tumor involving the right lower lobe is due to transbronchial spread from the larger tumor nodule involving the right upper lobe.

Lab Medicine - Pathology
Immunohistochemical Study

Description: Specimen - Lung, left lower lobe resection. Sarcomatoid carcinoma with areas of pleomorphic/giant cell carcinoma and spindle cell carcinoma. The tumor closely approaches the pleural surface but does not invade the pleura.
(Medical Transcription Sample Report)

CLINICAL HISTORY: Patient is a 37-year-old female with a history of colectomy for adenoma. During her preop evaluation it was noted that she had a lesion on her chest x-ray. CT scan of the chest confirmed a left lower mass.

SPECIMEN: Lung, left lower lobe resection.

IMMUNOHISTOCHEMICAL STUDIES: Tumor cells show no reactivity with cytokeratin AE1/AE3. No significant reactivity with CAM5.2 and no reactivity with cytokeratin-20 are seen. Tumor cells show partial reactivity with cytokeratin-7. PAS with diastase demonstrates no convincing intracytoplasmic mucin. No neuroendocrine differentiation is demonstrated with synaptophysin and chromogranin stains. Tumor cells show cytoplasmic and nuclear reactivity with S100 antibody. No significant reactivity is demonstrated with melanoma marker HMB-45 or Melan-A. Tumor cell nuclei (spindle cell and pleomorphic/giant cell carcinoma components) show nuclear reactivity with thyroid transcription factor marker (TTF-

1). The immunohistochemical studies are consistent with primary lung sarcomatoid carcinoma with pleomorphic/giant cell carcinoma and spindle cell carcinoma components.

FINAL DIAGNOSIS:
Histologic Tumor Type: Sarcomatoid carcinoma with areas of pleomorphic/giant cell carcinoma and spindle cell carcinoma.
Tumor Size: 2.7 x 2.0 x 1.4 cm.
Visceral Pleura Involvement: The tumor closely approaches the pleural surface but does not invade the pleura.
Vascular Invasion: Present.
Margins: Bronchial resection margins and vascular margins are free of tumor.
Lymph Nodes: Metastatic sarcomatoid carcinoma into one of four hilar lymph nodes.
Pathologic Stage: pT1N1MX.
