Histology Department

Histology is a specialized department of MercyOne Des Moines Laboratory. Histopathology involves the examination of a wide range of tissue samples including Bone Marrow biopsies, surgical resections and biopsies, dermatology biopsies and various body fluids. Samples are grossed (gross examination of the specimen with the bare eye), fixed in formalin and embedded into paraffin. Histology technicians cut the block of tissue into thin slices and create slides which are stained and examined under the microscope by pathologists. A major change in histopathology in recent years has been the development of Immunohistochemistry (IHC). IHC stains use a technique that involves attaching a dye to an antibody that will only bind to a certain protein type on or within a cell. IHC stains can discern one type of cancer from another. They are used to rule out differential diagnoses which significantly improves diagnostic accuracy.

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Gastrointestinal Panels by Multiplex Nucleic Acid Amplification Tests

CMS has limited coverage guidelines for the Gastrointestinal Pathogen (GIP) molecular assay identified by multiplex nucleic acid amplification test (NAAT’s) and will limit GIP coverage in immune competent beneficiaries up to five bacterial targets. (See CPT 87505). Also, if there is a clinical concern for Clostridium Difficile Colitis, then CMS will cover up to 11 targets if Clostridium Difficile is one of the organisms being tested for. (See CPT 87506).

Testing for 12 or more organisms will only be covered if a patient is critically ill or immunosuppressed. (See CPT 87507). The GIP test panel is a single service with a single unit of service and cannot be unbundled and billed as individual components, regardless if that test reports multiple individual pathogens and or targets.

Summary of Evidence:

GIP testing panels for parasites and viral etiologies are denied as not medically necessary because the GI disease is:

- Self-limited
- Specific virus therapies are not available
- Managed by supportive care and hydration

CMS specifies that additional testing for ova and parasite stool examination may be performed only on travelers with two or more weeks of symptoms AFTER bacterial pathogens have been ruled out and must be reasonable and necessary.

GIP testing is not warranted for community-acquired diarrhea if it is < 7 days duration without signs or symptoms of severe disease. If the community-acquired diarrhea lasts for > 7 days or is travel related and there are signs and symptoms of severe disease, then GIP testing is warranted. Additional directed testing may be indicated if the GIP results are negative.

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MercyOne Des Moines Laboratory was recently recognized nationally as one of the longest accredited laboratories by the College of American Pathologists. Accreditation for clinical laboratories began in 1964 and MercyOne Des Moines Laboratory is one of 41 labs that has been accredited since the program began more than 55 years ago. Stories appeared online on CAP.org and other trade websites. Read the full article here: www.prnewswire.com/news-releases/the-best-in-pathology-laboratory-quality-proficiency-testing-technology-patient-safety-300871692.html.

“We are very proud of the historic commitment to quality laboratory testing as a result of MercyOne Des Moines Laboratory’s long-standing relationship with CAP,” said Teri Reiff, Market Director, Laboratory Services. “The accreditation criteria set forth by CAP is recognized as among the most comprehensive and rigorous standards in the industry. As a result, our entire staff is committed to a persistent focus on clinical quality for our patients and providers.”

This honor speaks to the longstanding history of our high quality laboratory at MercyOne Des Moines, the only Iowa laboratory on this list.

What is an Antibiogram?

An antibiogram is an overall profile of antimicrobial susceptibility testing results of certain microorganisms to a panel of antibiotics. This profile is generated by the laboratory and data is summarized showing percentage of susceptibility. The Clinical and Laboratory Standards Institute (CLSI; formerly NCCLS) guidelines recommend compiling the antibiogram at least annually, including only the first isolate per patient in the period analyzed, and including only organisms for which > 30 isolates were tested in the period analyzed. Antibiograms help guide the clinician and pharmacist in selecting the best empiric antimicrobial treatment while waiting for the patient’s microbiology culture and susceptibility results. They are also useful for detecting and monitoring trends in antimicrobial resistance.

While the antibiogram is useful, it should not be relied upon as the sole tool for guiding therapy. Limitations of the antibiogram are as follows:

- Minimum inhibitory concentrations (MICs) are not included; as a result, subtle trends below the resistance threshold are not reflected.

- Data do not take into account patient factors such as history of infection or past antimicrobial use. Resistance patterns for certain drugs vary significantly by age, and a patient’s underlying medical condition may affect how well an antimicrobial works.

- Data are the result of single organism-antimicrobial combinations, therefore do not show trends in cross-resistance of an organism to other drugs, nor do they reveal synergistic properties of antimicrobials used in combination.

MercyOne Des Moines Laboratory compiles an antibiogram annually. It can be found on our web page, www.mercyone.org/desmoineslab under the “For Clients” tab. The MercyOne Des Moines Laboratory antibiogram includes isolates of cultures from patients of MercyOne Des Moines Medical Center and MercyOne West Des Moines Medical Center.
HISTOLOGY DEPARTMENT CONTINUED FROM PAGE 1

Our histology department offers numerous IHC antibody stains including the following:

- **GATA3 (L50–823)** – Aids in identification of breast and urothelial carcinomas
- **Smooth Muscle Myosin, heavy chain (SMMS-1)** – Helpful in distinguishing between benign sclerosing breast lesions and infiltrating carcinomas
- **P40 Antibody** – Helpful in diagnosing squamous cell carcinoma; can be used in any setting, including lung and skin cancers
- **SOX-10 (SP267)** – Helpful in diagnosing melanoma, including desmoplastic melanomas
- **CONFIRM anti-Thyroid Transcription Factor-1 (8G7G3/1)** – Aids in the classification of neoplasms of the lung and thyroid
- **VENTANA anti-p63 (4A4)** – Aids in differentiation of benign and malignant prostatic or breast lesions and in the differentiation of lung squamous cell carcinoma and lung adenocarcinoma
- **PIN4 Triple stain** – Cocktail of antibodies (p63, HMWCK, and AMACR); Helpful in diagnosing high grade prostatic intraepithelial neoplasia (PIN) and invasive prostatic adenocarcinoma
- **NKX3.1** – Helpful in diagnosing primary and metastatic prostatic adenocarcinoma
- **MMR proteins (MLH1, MSH2, MSH6, PMS2)** – A panel of stains helpful in evaluating for mismatch repair (MMR) protein abnormalities. When present, additional work up for Lynch syndrome may be necessary.

MercyOne Des Moines Laboratory Histology Department performs robust analytic validations on each IHC test to ensure the assay performs as expected and accurately identifies and/or quantifies the targeted analyte. This minimizes the chances of false positive or false negative results. All IHC stains are interpreted by one of our qualified pathologists in conjunction with histological examination and relevant clinical information.

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and diarrhea persists. No additional testing is indicated for GIP positive result unless the picture changes. Clostridium difficile molecular testing is warranted on health-care associated diarrhea with onset after the 3rd inpatient day or after recent antibiotic use.” (CMS, 2018).

CPT/HPCS Codes: Group 1 and Group 2 codes have different standards when meeting medical necessity. Please use the link below to view ICD-10 codes that meet medical necessity for the groups listed below. A service date is required to view up-to-date information regarding this LCD (L37766).

**Group 1 codes:**
- 87505 (3 – 5 Targets)
- 87506 (6 – 11 Targets)

**Group 2 code:** This code is covered in beneficiaries with immunodeficiency:
- 87507 (12 – 25 Targets)

For additional information please reference:

Questions can be directed to Rhonda Jones, Laboratory Billing Coordinator, at 515–643–2326.
New Instrumentation in MercyOne Des Moines Laboratory

On Aug 27, 2019, MercyOne Des Moines Laboratory began performing testing on a new chemistry platform called the Atellica, by Siemens. The Siemens Atellica is an integrated platform that performs both chemistry and immunoassay testing. Validation studies have been performed to ensure the validity of the analyzers.

Due to the conversion, several changes have taken place:

The total iron binding capacity (TIBC) is directly measured. The Iron and TIBC Profile includes measurements of iron, TIBC and % saturation (calculation). Transferrin has been removed from the Iron and TIBC Profile and will be ordered separately as needed.

Cholinesterase units of measure changed from kU/L (current) to U/L (Siemens Atellica). Reference ranges reflect the unit of measure change.

Thyroglobulin, tumor marker testing is not available on the Siemens Atellica. Testing will be sent to Mayo Clinical Laboratories until further notice.

Total Bilirubin critical values have been updated:

<table>
<thead>
<tr>
<th>Age (Male and Female)</th>
<th>Critical Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 1 day</td>
<td>&gt; 10.0 mg/dL</td>
</tr>
<tr>
<td>1 day – 2 weeks</td>
<td>&gt; 15.0 mg/dL</td>
</tr>
<tr>
<td>2 weeks – 1 yr</td>
<td>&gt; 15.0 mg/dL</td>
</tr>
</tbody>
</table>

Reference ranges have been updated based on studies conducted with samples from our normal patient population performed on the Atellica system and can be found alongside the patient’s result.

Collection requirements have changed for a few tests. Our test catalog has been updated with these changes. Please review tube type before drawing blood for testing.

If you have any questions, please contact Andrea Jones, Director, Laboratory-Hospital Services, at 515-247-4484.

Laboratory Patient Service Centers

MercyOne Des Moines Laboratory draw stations provide prompt, quality service at the locations listed below. For a basic blood draw, please utilize one of our three conveniently located patient service centers.

**MercyOne Des Moines Health Plaza**
411 Laurel St., Level A, Ste. 265, Des Moines
**P** 515-643-8924  **F** 515-643-8239
Mon.-Fri., 7 a.m.-5 p.m.

**MercyOne Clive Health Plaza**
1601 NW 114th St., Ste. 134, Clive
**P** 515-222-7500  **F** 515-222-7510
Mon.-Fri., 7 a.m.-5 p.m.

**MercyOne Ankeny Health Plaza**
800 E. First St., Ste. 1400, Ankeny
**P** 515-643-7710  **F** 515-643-8176
Mon.-Fri., 7 a.m.-4 p.m. (Closed noon - 1 p.m.)