INFLAMMATORY BOWEL DISEASE (IBD)
COMPREHENSIVE TESTING FOR DIFFERENTIATION, DIAGNOSIS, AND THERAPEUTIC MONITORING
FIRST-LINE DIFFERENTIATION BETWEEN IBD AND IBS

OVERLAPPING SYMPTOMS PRESENT CHALLENGES
Patients with symptoms that arouse clinical suspicion of either inflammatory bowel disease (IBD) or irritable bowel syndrome (IBS) are both common and tough to differentiate. However, because IBD and IBS are very distinct conditions with contrasting treatment strategies, differentiating between the two is essential.

A NON-INVASIVE OPTION
Calprotectin, an indirect marker of intestinal inflammation, is a first-line testing option that can help differentiate between IBD and IBS. Furthermore, it may eliminate the need for additional invasive procedures or imaging studies, which are costly, involve sedation, and require patient compliance with fasting and bowel preparation.

FEATURED TEST
- Calprotectin, F (Mayo Test ID: CALPR)

DIFFERENTIATING ASPECTS OF IBD AND IBS

<table>
<thead>
<tr>
<th></th>
<th>IBD</th>
<th>IBS</th>
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<tbody>
<tr>
<td>Disease</td>
<td>Changes bowel tissue and increases risk of colorectal cancer</td>
<td>Doesn’t increase risk of disease</td>
</tr>
<tr>
<td>Diagnosis</td>
<td>Diagnosis based on endoscopic evaluation and lab tests</td>
<td>Diagnosis based on symptoms—no biological marker</td>
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<tr>
<td>Rectal Bleed</td>
<td>No rectal bleeding</td>
<td></td>
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<tr>
<td>Treatment</td>
<td>Treatment requires steroids or immunosuppressive medications</td>
<td>Treatment requires non-prescriptive lifestyle changes</td>
</tr>
<tr>
<td>Surveillance</td>
<td>Close surveillance of patients—repeat tests and colonoscopic evaluations</td>
<td>Limited follow-up with patients</td>
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GASTROENTEROLOGY AT MAYO CLINIC

IBD BY THE NUMBERS

1.6 Million
Number of Americans who currently have IBD

3.9 Million
Prescriptions written for medications to treat IBD in the U.S. in 2010

$31 Billion
Annual financial burden of IBD in the U.S.

294,000
Hospitalizations specifically for Crohn’s disease and ulcerative colitis in the U.S. in 2010

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INFLAMMATORY BOWEL DISEASE (IBD)

DIAGNOSIS OF CROHN’S DISEASE AND ULCERATIVE COLITIS THROUGH SEROLOGICAL TESTING

Many commercial laboratories that do not treat patients advocate much wider application of laboratory testing, including serologic assessment, genetic testing, and inflammatory marker quantitation approaches. Peer-reviewed clinical literature only supports the use of three serologic tests for IBD and for limited applications.

APPROPRIATE TESTING, GUIDED BY TREATMENT OF IBD PATIENTS

At Mayo Clinic, serologic testing for IBD is only used when a diagnosis of IBD has been made using modalities such as flexible sigmoidoscopy or colonoscopy with mucosal biopsies and radiographic studies, but where the results do not clearly differentiate between ulcerative colitis and Crohn’s disease.

Our serology panel, which is based on significant peer reviewed literature, examines only the characteristic patterns of antibodies with demonstrated clinical utility:

- *Saccharomyces cerevisiae* antibodies, IgA
- *Saccharomyces cerevisiae* antibodies, IgG
- Neutrophil specific antibodies (perinuclear anti-neutrophilic cytoplasmic antibody—pANCA)

FEATURED TEST

- Inflammatory Bowel Disease Serology Panel, Serum (Mayo Test ID: IBDP)

MONITORING THERAPY THROUGH TESTING OF ADALIMUMAB AND INFlixIMAB CONCENTRATIONS

REFLEXIVE TESTING—A NOVEL APPROACH

Measurement of adalimumab and infliximab concentrations helps guide clinicians in making treatment decisions for their IBD patients. Clinically significant antibodies are found in patients with very low-trough drug concentrations in their serum. Therefore, a reflexive approach, which performs testing only when it is clinically relevant, benefits patients and reduces costs for the ordering institution.

FEATURED TESTS

- Adalimumab Quantitation with Reflex to Antibody, Serum (Mayo ID: ADALX)
- Infliximab Quantitation with Reflex to Antibodies to Infliximab, Serum (Mayo Test ID: INFXR)

COMPREHENSIVE GENETIC EVALUATIONS FOR PATIENTS WITH A PERSONAL OR FAMILY HISTORY OF IBD

Patients with a diverse spectrum of rare genetic disorders can present with IBD. These patients often develop symptoms during infancy or early childhood, along with endoscopic and histological features of Crohn disease, ulcerative colitis, or unclassified forms of IBD. This testing identifies variants within genes known to be associated with IBD and immunodeficiency that can help establish a diagnosis and, in some cases, allow for appropriate management and surveillance for disease features based on the gene involved.

FEATURED TEST

- Inflammatory Bowel Disease Primary Immunodeficiency (PID) Panel (Mayo ID: IBDGP)
BY THE NUMBERS CITATION

COLLEGIATE ACCESS TO MAYO CLINIC CLINICIANS, LABORATORIANS, AND GENETIC COUNSELORS

When you partner with Mayo Medical Laboratories, you extend your network to include some of the world’s leading gastroenterology experts. Mayo Clinic clinicians, laboratorians, and genetic counselors are available to discuss testing options, interpret results, or help with case review and coordination.

FOR MORE INFORMATION ABOUT GASTROENTEROLOGY TESTING, VISIT:
MayoMedicalLaboratories.com/GI