UMass Memorial Health Colonoscopy Preparation and Procedure Frequently Asked Questions (FAQs)

What is a Colonoscopy?

What is a colonoscopy?

A colonoscopy is a procedure that allows your healthcare provider to check the inside of your colon or large intestine. The procedure is done using a long flexible tube, called a colonoscope. The colonoscope has a tiny camera and light on one end that is put in your rectum and moved into your colon. The camera sends images back to your provider for evaluation and can show inflamed tissue, polyps, ulcers, and other abnormal growths. Your provider may remove tissue or abnormal growths for further examination.

Why do I need a colonoscopy?

You may have a colonoscopy to:

- Look for problems in your colon such as: early signs of cancer, red or swollen (inflamed) tissue, open sores (ulcers) or bleeding.
- Examine the inside of your colon to: check for polyps and screen for colorectal cancer; check for the cause of blood in the stool or rectum, chronic diarrhea, iron deficiency anemia, or long-term, unexplained belly or rectal pain.
- Examine the inside of your colon after abnormal test results from a barium enema, blood in stool test, CT colonography scan, stool DNA test, or sigmoidoscopy.
- Treat colon problems such as inflammatory bowel disease (IBD).
- Clean the lining of your colon with a water jet (irrigate).
- Remove any liquid stool with a suction device.
- Inject air into your bowel to make it easier to see inside.
- Work inside your bowel with surgical tools.

What are the health benefits of having a colonoscopy?

One of the major reasons to have a colonoscopy is to check for colon polyps or colon cancer. A colonoscopy can reveal pre-cancerous or cancerous polyps that may then be removed during the procedure or in a follow-up procedure. While not all polyps are cancerous some may become cancerous. Having a colonoscopy decreases your chance of having polyps that become cancerous over long periods of time.

What do colonoscopies detect?

A colonoscopy is used to screen for colorectal cancer. A screening means looking for cancer in people who don't have any symptoms of the disease. A colonoscopy can help your provider look for and treat (if needed) problems in your colon such as colon polyps, tumors, ulcers, redness or swelling (inflammation), pouches (diverticula) along the colon wall, narrow areas (strictures) of the colon, and any objects that might be in the colon. *More information on colorectal cancer and other gastrointestinal procedures can be found under "Results and Colorectal Cancer"

What happens during a colonoscopy?

*More information found under "What to Expect on the Day of your Procedure"

You may have your colonoscopy as an outpatient, meaning you go home the same day. Or your colonoscopy may be done as part of a hospital stay. The way your procedure is done varies depending on your condition and your healthcare provider's practices. The colonoscopy follows this general process:

- (a) Arrive and check-in approximately 45 minutes prior to your scheduled appointment time.
- (b) You may be asked to remove any jewelry or other objects that might get in the way.
- (c) You may be asked to remove your clothing and be given a gown to wear.
- (d) An IV (intravenous) line with a sedative or pain medicine will be inserted in your arm or hand.
- (e) You may be given oxygen to breathe in.
- (f) Your heart rate, blood pressure, respiratory rate, and oxygen level will be monitored.
- (g) You will be asked to lie on your left side with your knees pulled up towards your chest.
- (h) A colonoscope will be greased, put into your anus, and moved into your rectum and colon. You may feel mild pain, pressure or cramping but the sedative should reduce your discomfort.
- (i) Depending on the type of anesthesia or sedative, you may be completely asleep. If you are awake, you may be asked to take slow, deep breathes or change your position while the tube is being inserted. This helps to relax your abdominal muscles and decrease discomfort.
- (j) Your healthcare provider will check your colon and may take photos. If a polyp is found, it may be taken out or left there until another procedure is done.
- (k) Once finished, the tube will be taken out and you will be moved to another room to recover.
- (1) For an outpatient procedure, you will be able to leave with your ride later that day. For an inpatient procedure, you will be moved to your overnight room to stay.

At what age should I have my first colonoscopy and how often do I need one?

In general, you should have your first colonoscopy when you are 45. After, if you do not have any risk factors it is recommended that you be screened every 10 years. If you have risk factors, some of which are a personal or familial history of polyps, a familial history of colorectal cancer, or a personal medical history of cancer, you should be screened more frequently, such as every 5 years. There are additional factors that may increase your risk of developing a polyp or colorectal cancer. Talk to your doctor about when and how frequently you should have a colonoscopy. *More about risk factors can be found under "Results and Colorectal Cancer".

Are there alternative procedures or tests to a colonoscopy that provide the same results?

The alternative to a colonoscopy is Cologuard, another colon cancer screening tool. Speak with your Primary Care Provider (PCP) to see if you are a candidate and if so, your PCP will order it. Our providers do not order Cologuard testing. *More about other gastrointestinal procedures can be found under "Results and Colorectal Cancer".

What are the associated risks and complications with a colonoscopy?

All procedures have risks. Some possible risks of a colonoscopy include:

- Continued bleeding after tissue sample (biopsy) or polyp removal.
- Nausea, vomiting, bloating, or rectal irritation caused by the procedure or by the bowel cleansing (prep) that is done before.
- Bad reaction to the pain medicine or the medicine used to relax you (sedative).
- A perforation (small hole) or tear of the colon wall that may cause bleeding, which is rare.

Depending on your condition, you may have other risks. Discuss any concerns with your provider before your procedure.

Preparing for your Colonoscopy: Transportation, Finances, Preparation, Medications, Diets, and Timing.

Before you agree to a colonoscopy or any procedure, make sure you know:

- The name of the test or procedure.
- The reason you are having the test or procedure.
- What results to expect and what they mean.
- When and how you will get the results of your procedure.
- The risks and benefits of the test or procedure.
- The possible side effects or complications of the procedure.
- When and where you will have the test or procedure.
- Who will do the test or procedure and what are that person's qualifications.
- What would happen if you did not have the test or procedure.
- Any alternative tests or procedures to consider.
- Who to call after the test or procedure if you have questions or problems.
- How much you will have to pay for the test or procedure and whether it will be covered by your insurance.

When should my ride be ready to pick me up on the day of my procedure?

You should expect to arrive 45 minutes prior to your procedure. The procedure itself should take around 30 to 45 minutes but you will need time to recover after. You should expect to spend approximately 2-3 hours at your appointment. Your ride will be contacted when your procedure is over, and it is time for them to pick you up.

Why may I NOT drive myself?

You will be given pain medicine and a sedative to relax you before the procedure. It may take longer than the duration of your appointment for the sedative to ware-off. Someone must drive you home.

Will the cost of my procedure be covered under my insurance?

If you are scheduled or looking to schedule your colonoscopy, contact your insurance company about coverage and co-pay for the procedure. If your insurance company requires authorization, our office will reach out.

COVID-19 Testing requirements:

You should be covid tested 72 to 48 hours prior to your procedure. You may not eat or drink anything 30 minutes before providing your saliva for the covid test sample. You will receive a printout with instructions and locations you may be tested. All testing guidelines are subject to change.

How do I prepare for my procedure?

Your healthcare provider will explain the procedure to you, answer any questions you may have, and provide you with prep instructions. You may be asked to sign a consent form that gives permission for the procedure. Read the form carefully and ask questions if anything is not clear. You will be given directions on how to prepare; it is mandatory to carefully follow all instructions. You may be asked to take a laxative, an enema, a rectal laxative suppository, or drink a special

fluid that helps clean out your colon. You may be expected to follow a low fiber diet and/or a clear liquid diet in the days prior to your procedure. Specific preparation instructions will be given to you by your provider when you schedule your appointment.

What should my provider know about my past medical history prior to my procedure?

When scheduling your procedure, talk to your provider about your current medications and previous medical procedures. Discuss any familial or personal history of colorectal cancer and any previous colonoscopy results.

Why does the preparation procedure need to be followed and what happens if I fail to follow the procedure?

Follow all directions that you are given regarding diets and prep prior to your procedure. Instructions for prep, low fiber diet, and clear liquid diet are meant to clean out your bowel for your provider to screen the inside of your bowel. Failure to follow your instructions may result in the cancellation of your procedure and you would need to reschedule and complete the prep again properly.

Why do prep instructions differ between patients and/or procedure location?

Your prep instructions may differ from others. The prep (MiraLAX, Colyte/Golytely/Nulyte, SuTab, etc.) you are prescribed will depend on your condition and your provider's preferences. Ideally, the type of prep and time commitment will allow for optimum patient compliance.

Where do I get or pick up my prep?

Your prescription prep will be sent to your preferred pharmacy. When scheduling your colonoscopy, check to make sure your pharmacy is correct.

Why can't MiraLAX/Dulcolax be sent to the pharmacy?

MiraLAX/Dulcolax have been discontinued and is a bowel prep for our GI providers only. When you are scheduled for your procedure with one of our Colorectal surgeons, their office will mail the instructions for MiraLAX/Dulcolax. This is the only prep those physicians use and since the prep is over the counter you will not be sent a prescription. If our GI providers find an exception to this and you need to use over the counter MiraLAX/Dulcolax your provider will purchase it as well. Your requesting provider will be consulted to see if they will send it as a script, but that is uncommon.

Will I need to stay home from work and other obligations while I prep, or can I continue with my normal schedule?

The prep does not require that you stop all obligations prior to your procedure. However, the prep is a laxative and therefore you will want to have easy access to a bathroom the day before your procedure.

What are common side-effects I might experience from the prep and what can I do to remediate them?

Common side-effects of colonoscopy prep are nausea, vomiting, abdominal pain, bloating, and thirst. If you are lightheaded, lie down, don't take a shower or bath until it passes. If you are

experiencing nausea or vomiting, wait 30 minutes then continue drinking the prep in smaller amounts.

When will I start to have bowel movements after taking the prep?

Bowel movements should begin about 2-3 hours after beginning to drink the prep. The exact time varies based on specific preparation medications. Be prepared to spend time in the bathroom after taking the prep.

What should I do if I have gastroesophageal reflux disease (GERD) or constipation?

If you have gastroesophageal reflux disease (GERD) you may continue to take your GERD medication while prepping for your procedure. In terms of constipation, the prep is a laxative which will produce bowel movements and relieve constipation. If you have a history of severe constipation, you may want to do a 2-day bowel prep instead. Discuss your options and the best course of action with your provider.

Will my bottom be sore from all the loose stools and what can I do to remediate that?

Your bottom might be sore from all the loose stools. To help with this, use baby wipes along with petroleum jelly or diaper rash ointment around the anus to minimize anal irritation.

How will I know if the prep worked?

When the preparation starts to work, stay in or near the bathroom, because when the urge hits, it's hard to hold back. Keep drinking even if you have not had a bowel movement. On the day of your procedure, when your stool is clear or light yellow, you're ready! If your stool is not clear or light yellow, use one (1) saline fleet enema, if prescribed, or talk with you provider.

Should I continue taking my daily medications (blood thinners, antibiotics, vitamins, iron pills, liquid antacids, other prescribed medications)?

You should tell your provider:

- If you are sensitive to or allergic to any medicines, latex, tape, or anesthesia medicines (local and general).
- About all the medications you take including over the counter, prescriptions, vitamins, herbs, and other supplements.
- If you have a history of bleeding disorders or if you are taking any blood-thinning medications, aspirin, ibuprofen, or medications that affect blood clotting.
- If you are pregnant or think you may be pregnant.
- As a general prep rule, stop using fiber supplements (Metamucil, Citrucel, Fiberall) and stop taking iron pills, fish oil, vitamin E and supplements.

Your provider will provide you with specific instructions on which medications to continue and which you should stop taking.

DO NOT stop taking medications without talking to your prescribing doctor. See next question for specific information on diabetes medications.

If you're a patient of our Diabetes Center, please follow the instructions below:

If you have any questions regarding these instructions, please reach out to your prescribing doctor:

Diabetics on oral agents only: (i.e., Glyburide, Glipizide (Glucotrol), glimeperide (Amaryl), metformin (Glucaphage, Metaglip), Rosiglitazone (Avandia, Avandamet), pioglitazone (Actos))

- Stop oral agents on the day before the procedure.
- Stop oral agents on the morning of your procedure.
- Resume regular dose of medications at supper only after your procedure provided you have resumed your diet.

Diabetics on insulin:

NPH or Lente Insulin

- Take only $\frac{1}{2}$ of usual NPH or Lente dose on the day before the procedure.
- Take $\frac{1}{2}$ of usual NPH or Lente dose only on the morning of your procedure.
- Do not take fast acting insulin (i.e., regular, Humalog (Lispro), Novolog (Aspart)) on the morning of the procedure. You may require supplemental fast acting insulin at the procedure for blood sugar over 200. You should bring your own insulin to the procedure.
- Resume normal doses after procedure.

Lantus

- Take only 2/3 dose of Lantus the day before the procedure.
- Take 2/3 dose of Lantus the day of your procedure.
- Do not take fast acting insulin (i.e., regular, Humalog (Lispro), Novolog (Aspart) on the morning of the procedure. You may require supplemental fast acting insulin at procedure for blood sugar over 200. You should bring your own insulin to the procedure.

Diabetics on an insulin pump: Please contact Endocrinology for instructions.

Low-Fiber Diet and Clear Liquid Diet

The low fiber diet provides food options that are low in fiber and limit milk and dairy products to minimize the amount of material remaining in the lower bowel after digestion. This will prepare the digestive tract prior to your clear liquid diet. The low fiber diet will begin within one week prior to your procedure while the clear liquid diet will begin 2 days prior to your procedure.

Can I have protein drinks?

No. The prep requires clear liquids only.

If I "juice" my food, can I drink it?

No. Juicing your food may leave food particles and pulp.

Why do clear liquids need to be sugar free?

Your clear liquids need to be sugar free because sugar may dehydrate the body or affect the water balance in the bowels.

Why can't I have chicken broth, but I can have bouillon?

Chicken broth may contain chicken particles which would affect the bowel prep as you should only be consuming clear liquids two days prior to your procedure.

Will I get a date and time confirmation?

If you are signed up for text messages from UMass Memorial, you will receive continuous reminders on preparation instructions. All patients will receive a call to confirm their procedure, location, and arrival time.

Given the time of my procedure, when should I plan to arrive and check-in?

In general, you should arrive 45 minutes prior to your procedure to check-in and finish preparing for your procedure.

If my procedure is at 7 am do I really need to wake up at 2 am (5 hours earlier) to finish my (specified) prep?

Yes! If your prep requires, it is necessary to finish the prep at least 5 hours prior to your procedure meaning you must wake up in the middle of the night to finish your prep. This may not be the case for all preps.

How long should I expect to be at my appointment (from arrival to departure)?

You could spend 2-3 hours in the colonoscopy unit from the time you arrive until the time you depart. We try to start on time, but medical care can result in unavoidable delays.

What to Expect on the Day of your Colonoscopy: Morning of, During, and After.

What happens the morning of my procedure?

Depending on the time of your procedure you may need to finish your prep. You may continue to drink clear liquids up until 2 hours before your procedure. After arriving for your procedure, you will be checked-in and brought to a procedure room, asked to remove all jewelry and will be given a gown to wear. You will be given a sedative or pain medicine through an IV (intravenous) line. You will also be given oxygen to breath in and your blood pressure, respiratory rate, heart rate, and oxygen level will be monitored throughout. For the procedure you will be asked to lie on your left side. Depending on the anesthesia or sedative given you may be able to feel the colonoscope, but your provider will walk you through the procedure and how to avoid major discomfort. For most, the sedative and pain medicines cause you to feel sleepy and relaxed, so you may not remember much of the procedure.

Can I shower, eat breakfast, or brush my teeth the morning of my colonoscopy?

You may not eat anything the morning of your procedure, but you may continue to drink clear liquids up until 2 hours before your procedure. You may shower and brush your teeth.

Will I be shaved before my colonoscopy?

You will not be shaved before your colonoscopy.

If I am actively menstruating can I wear a tampon, pad, or diva cup?

Your menstrual cycle will not affect your colonoscopy. Your underwear will be removed during the procedure, so you may use continue to use internal products only.

What do I need to bring to my procedure?

- Name and phone number of the person who will take you home
- Photo ID
- Insurance card
- A copy of your current medications and doses
- Your pacemaker or internal defibrillator device card (if applicable)

How long will my procedure take?

You should expect to spend 2-3 hours at your procedure. While the colonoscopy itself will be 45 minutes, you will need time to check-in before the procedure and recover after.

How much of my body will be exposed?

You will be given a gown to wear during your procedure and you will be asked to remove your underwear. Other than your anus, the gown will cover the rest of your body. Your provider will insert the colonoscope through your anus and move it through your rectum into your colon.

Will I be sedated or under anesthesia?

The sedation or anesthesia used depends on your previous medical history and your providers preference. Some patients will receive light sedation and may feel the colonoscope throughout the procedure while others will be under anesthesia and feel nothing. Whether you receive sedation or anesthesia, most patients do not remember much about the procedure. Speak with your provider about what you will be given.

Will I be able to feel the colonoscope and will it hurt?

Depending on the amount of sedation given you may be able to feel the colonoscope. This may cause discomfort, mild pain, pressure or cramping. Your provider may ask you to take slow deep breaths or move positions as the colonoscopy is inserted to relieve this discomfort.

What happens after my procedure?

After your procedure, you will be taken to the recovery room to be watched. Your recovery process will depend on the type of sedative you have been given. Once your blood pressure, pulse, and breathing are stable and you are awake and alert, you will be taken to your hospital room or you may be discharged to your home. You will NOT be able to drive so make sure you have someone scheduled to drive you home.

What is a normal response to the procedure?

After the procedure, you may pass gas (be flatulent) and feel gas pains in your stomach. Walking and moving about may help to ease any mild pain.

What should do if I am experiencing severe pain or an abnormal response after my procedure?

Tell your provider if you have any of the following:

- Fever or chills.
- Frequent bloody stools.
- Severe belly pain or swelling.

- Your belly feels hard.
- You are not able to pass gas.

Your healthcare provider may give you other instructions to ease pain and symptoms, depending on your situation.

How much rest will I need after my procedure and when can I go back to work and activities? After your procedure you should take the rest of the day off to rest and allow for the sedation to wear off. Avoid alcohol, driving, and major work decisions. You may need more time to recover if a polyp was removed.

Can I eat and drink normally after my procedure?

You can often eat whatever you feel you can tolerate after the procedure. Some people start with small, bland meals, others do not. You should not drink alcohol for at least 24 hours after your procedure. You may be asked to drink extra fluids to make up for the water you lost while you prepared for the procedure.

Results and Colorectal Cancer.

When will I learn about the results of my procedure?

In general, you will receive information about the results of your procedure 2-3 weeks after. If you have not heard anything after 3 weeks, call your provider or the hospital.

What is a biopsy? How do I get the report?

A biopsy is the removal of tissue to examine it more closely. Your provider will discuss how to proceed if a biopsy was taken.

Will I need follow-up appointments?

Everyone is recommended to return every 10 years for a repeat colonoscopy. If you are at higher risk of colorectal cancer you may be asked to return every 5 years. If results from other procedures indicate, you may have a colonoscopy after fewer years. If a polyp is removed or a biopsy is taken, your provider will direct you how to proceed.

What does it mean if a polyp is detected and/or removed?

Polyps can be pre-cancerous, cancerous, or not cancerous at all (benign). If a polyp is removed during your colonoscopy, it will be taken to the lab for examination and your provider will contact you with the results.

Is it normal for polyps to be detected?

It is fairly common for polyps to be found and removed during a colonoscopy. In general, polyps found during routine screening are benign or would take over 10 years to become cancerous.

What are major risk factors for colorectal cancer?

There colorectal cancer risk factors that are lifestyle-related and may be changed and others that are genetic and cannot be changed

Factors that you have control over that may INCREASE your risk for colorectal cancer:

- Weight: overweight and obese
- Activity: not physically active
- Diet: high in red or processed meat
- Smoking: frequently smoke
- Alcohol: heavy use of alcohol

Factors that you cannot control that may INCREASE your risk for colorectal cancer:

- Age: people over the age of 50
- Personal or familial history of colorectal polyps or cancer
- Personal history of inflammatory bowel disease
- Racial and ethnic background: People who are African American or Jewish
- Diabetes: People with type 2 diabetes

Having a major risk factor does not mean you will get colorectal cancer. Many people who get colorectal cancer do not have any major risk factors.

Even if I am not at risk of having colorectal cancer, do I still need a colonoscopy and why?

Although having a familial history of colorectal cancer or polyps puts some patients at higher risks of developing colorectal cancer, anyone can get colorectal cancer. Screening every couple of years decreases the likelihood of developing colorectal cancer unknowingly, allows providers to remove pre-cancerous polyps before they become cancerous, and hopefully catches cancer in the early stages if you do have cancer.

Do colonoscopies prevent colorectal cancer?

Colonoscopies do not directly prevent colorectal cancer. Colonoscopies are a tool used to screen for polyps, tumors, ulcers, redness and swelling, pouches (diverticula) on the colon wall, narrowed areas of the colon, and any objects that might be present in the colon. Colonoscopies are done to detect colorectal cancer in early stages or remove polyps that may become cancerous.

What does the colon do and how many different sections are there?

The colon, or large intestine, is the last part of your digestive system. It absorbs water to change waste from liquid to solid stool. The large intestine is about 5 feet long in adults and has 4 different sections:

- (1) Ascending colon: extends upward on the right side of your belly.
- (2) Transverse colon: extends from the ascending colon across your body to the left side of your belly.
- (3) Descending colon: extends from the transverse colon downward on the left side of your belly.
- (4) Sigmoid colon: extends from the descending colon to your rectum, in an S-shape.

The rectum joins the anus, which is the opening where stool passes out of your body.

Other Endoscopic and Gastrointestinal Procedures.

The following procedures are also used to examine the colon. Many of these procedures may be done first, as the prep is not as extensive, and may indicate the necessity for a colonoscopy for further examination.

<u>Sigmoidoscopy</u>: This diagnostic procedure examines the sigmoid colon, the lowest part of your colon closest to the rectum. This test is used to diagnose conditions with symptoms of diarrhea, constipation, belly pain, polyps, and bleeding. Similarly to a colonoscopy, during a sigmoidoscopy a long flexible tube, called a sigmoidoscope, is put into your rectum and moved into your sigmoid colon. The sigmoidoscope also has a tiny camera and light on one end that are used to look for colon polyps and signs of ulcerative colitis. If the results indicate, your provider may suggest a colonoscopy for further examination.

<u>Upper Gastrointestinal (UGI) Endoscopy</u>: This diagnostic procedure examines the upper gastrointestinal tract, which contains the mouth, esophagus, stomach, and first part of the small intestine (the duodenum). During a UGI endoscopy, a long flexible tube, called an endoscope, is put into your mouth, and moved into your throat, esophagus, stomach, and duodenum. The endoscope has a tiny camera and light on one end to look for ulcers, narrowing or blockages, swelling, Celiac disease, or Crohn's disease. Your provider may insert additional tools to assist in obtaining tissue samples for a biopsy, removing stuck items, and stop bleeding. If the results indicate, your provider may suggest a colonoscopy for further examination of the lower gastrointestinal tract, which contains the rest of the small intestine and the colon (or large intestine).

<u>CT Colonography</u>: This diagnostic procedure is a virtual colonoscopy in which a CT (computed tomography) scan is used to examine the inside of the colon and rectum. You will likely be asked to follow a prep procedure, somewhat like the one for a colonoscopy, to clear out your bowels before the procedure. The scan uses low-dose radiation to take pictures of the inside of your colon and rectum to look for polyps and cancer. If the results indicate, your provider may suggest a colonoscopy for further examination.

<u>Blood in Stool Test (Fecal Occult Blood Test)</u>: This test is used to determine if there is blood in your stool which may indicate polyps on the colon, hemorrhoids (swollen blood vessels), ulcers, Crohn's disease, or Diverticular disease. This is an at-home test in which 3 stool samples will be collected, and the samples will be examined by your provider. If the results indicate, your provider may suggest a colonoscopy for further examination.

<u>Stool DNA Test (Cologuard)</u>: This test looks for abnormal DNA that may be related to colon polyps and/or colon cancer. Similarly to a colonoscopy, this test is done to screen for colon cancer or colon polyps in people with no symptoms. During this test, you will be given a kit to collect a sample of your stool which should then be returned to your provider for examination. As mentioned in "What is a Colonoscopy?" our providers do not order Cologuard, you must speak with your primary care provider (PCP) to have this test. If the results indicate, your provider may suggest a colonoscopy for further examination.

<u>Barium Enema</u>: This test looks for abnormal growths on the lower gastrointestinal tract, including the colon and rectum. The colon is filled with barium sulfate that appears white on X-ray films. During this test, an X-ray is taken of the lower gastrointestinal tract to view abnormalities such as inflammation (swelling), polyps, or cancer. If the results indicate, your provider may suggest a colonoscopy for further examination.

The following procedures are done by our providers to diagnose other gastrointestinal conditions and diseases.

<u>Video Capsule Endoscopy</u>: This painless and noninvasive approach may be used to examine your gastrointestinal tract. During this procedure, you swallow a disposable, miniature video camera contained in a capsule, which delivers high-quality color images while you continue normal daily activities. This technology can diagnose conditions such as Crohns' disease, celiac disease, tumors, iron deficiency anemia and obscure bleeding.

<u>Endoscopic Ultrasound</u>: This procedure plays an important role in the management of upper gastrointestinal disorders of the esophagus, pancreas, stomach, lung, and bile duct. With this technology, our doctors can view various types of cancers, evaluate chronic pancreatitis, and study abnormalities of the bule duct and lesions in the intestinal wall.

<u>Photodynamic Laser Therapy</u>: This is a nonsurgical treatment of esophageal cancers and Barrett's esophagus. This therapy involves intravenous (IV) infusion of a photosensitive agent, which is retained in cells. Light from a laser is absorbed into the cells and produces oxygen radicals, which destroy the abnormal cells.

<u>Double Balloon Enteroscopy (DBE)</u>: This procedure is performed with one of the few specialized scopes available in the United States. DBE allows the endoscopist to view your entire small intestine and obtain an endoscopic exam. More importantly, it allows your doctor to perform various procedures throughout the small intestine.

QUESTIONS: Call our office at (508) 334-8036 to speak with a member of the team.