

Continue































**Purpose/Preparation/Procedure/Results** What is a Doppler ultrasound?A Doppler ultrasound is a test that uses high-frequency sound waves to measure the amount of blood flow through your arteries and veins, usually those that supply blood to your arms and legs. Vascular flow studies, also known as blood flow studies, can detect abnormal flow within an artery or blood vessel. This can help to diagnose and treat a variety of conditions, including blood clots and poor circulation. A Doppler ultrasound can be used as part of a blood flow study.A Doppler ultrasound is a risk-free and pain-free procedure that requires little preparation. The test provides your doctor with important information about the flow of blood through your major arteries and veins. It can also help detect blocked or reduced blood flow that may lead to a stroke. Your doctor may suggest a Doppler ultrasound exam if you show signs of decreased blood flow in your legs, arms, or neck. A reduced amount of blood flow may be due to a blockage in the artery, a blood clot inside a blood vessel, or an injury to a blood vessel.Your doctor may order a Doppler ultrasound exam if you show signs of:deep vein thrombosis (DVT), a condition that occurs when a blood clot forms in a vein deep inside your body (usually in the leg or hip regions)superficial thrombophlebitis, an inflammation of the veins due to a blood clot in a vein just below the skin's surfacearteriosclerosis, a narrowing and hardening of the arteries that supply blood to the legs and feetthromboangiobliateritis, a rare disease in which the blood vessels of the hands and feet become inflamed and swollenvascular tumors in your arms or legsA Doppler ultrasound can help determine the blood pressure within your arteries. It can also show how much blood is currently flowing through your arteries and veins.In general, there's no preparation required for this test. If you're a smoker, your doctor may ask you to stop smoking for several hours before the test. Smoking causes the blood vessels to narrow, which can affect the results of your test.A Doppler ultrasound is a noninvasive, painless procedure that doesn't expose you to harmful radiation. There are no risks associated with this test, and most people feel little to no discomfort during the procedure.The test is usually performed in the radiology department of a hospital, doctor's office, or peripheral vascular laboratory. The procedure can vary slightly, but in general, you can expect the following:You'll need to remove clothing, jewelry, and any other objects from the area that will be studied. However, there's no need to remove your glasses, contact lenses, dentures, or hearing aids. You may be asked to wear a hospital gown. Before the procedure, you'll be instructed to lie down on an examination table or bed.Your doctor will then place a water-soluble gel on a handheld device called a transducer, which directs high-frequency sound waves into the arteries or veins being studied. To examine your arteries, the person administering the test may place blood pressure cuffs around various areas of your body. The cuffs will generally be applied to your thigh, calf, ankle, or different points along your arm. These cuffs help compare the blood pressure in different parts of your leg or arm. Images are created as the transducer is pressed against your skin and moved along your arm or leg. The transducer sends sound waves through your skin and other body tissues to the blood vessels. The sound waves echo off your blood vessels and send the information to a computer to be processed and recorded. The computer will produce graphs or pictures that show the flow of the blood through the arteries and veins. The transducer will be moved to different areas for comparison. You may hear a "whooshing" sound as blood flow is detected.When examining your leg arteries and veins, your doctor will look for narrowing of the blood vessels. This condition may cause skin discoloration, pain when you walk or rest, and ulcers on the foot or ankle.Read more: Ankle ulcers "The test will be completed in about an hour. Depending on your signs and symptoms, you may be asked to perform some mild exercises after the procedure.In general, there are no special instructions following a Doppler ultrasound. You may resume your usual activities right away, unless your doctor tells you otherwise.Normal test results indicate that you have no narrowing or blockages in your arteries. It also means that the blood pressure in your arteries is normal.Abnormal blood flow patterns, including narrowing or closing of the arteries, can indicate:blockage in the arteries, which may be due to a buildup of cholesterol blood clots in a vein or artery poor circulation, which can be caused by damaged blood vesselswenous occlusion, or closing of a veinaspastic arterial disease, a condition in which the arteries contract due to stress or exposure to cold weatherblockage or clots in an artificial bypass graftSome factors may compromise your results, which means the test will need to be done again. These factors include:The test results will be sent to your doctor. If any abnormalities are found, your doctor will explain your results in more detail and inform you about any additional tests or treatments you may need. Although the ultrasonographer administering the test has an idea of what he or she is looking at, they will be unable to discuss the results of the test during the exam. The results must come from your doctor or advanced practice provider. Bonaca MP, Creager MA. Peripheral artery diseases. In: Libby P, Bonow RO, Mann DL, Tomaselli GF, Bhatt DL, Solomon SD, eds. Braunwald's Heart Disease: A Textbook of Cardiovascular Medicine. 12th ed. Philadelphia, PA: Elsevier; 2022:chap 43.Kremkau FW. Principles and instruments of ultrasonography. In: Pellerito JS, Polak JF, eds. Introduction to Vascular Ultrasonography. 7th ed. Philadelphia, PA: Elsevier; 2020:chap 2.Pascarella L, Marston W. Venous disease. In: Townsend CM Jr, Beauchamp RD, Evers MB, Mattox KL, eds. Sabiston Textbook of Surgery. 21st ed. St Louis, MO: Elsevier; 2022:chap 65.Stone PA, Clark RM. Vascular laboratory: arterial duplex scanning. In: Sidway AN, Perler BA, eds. Rutherford's Vascular Surgery and Endovascular Therapy. 10th ed. Philadelphia, PA: Elsevier; 2023:chap 22.Page 2Butts C. Ultrasound. In: Roberts JR, Custalow CB, Thomsen TW, eds. Roberts and Hedges' Clinical Procedures in Emergency Medicine and Acute Care. 7th ed. Philadelphia, PA: Elsevier; 2019:chap 66.Fowler CG, Lefevre N. Emergency department, hospitalist, and office ultrasound (POCUS). In: Fowler CG, ed. Pfenniger and Fowler's procedures for Primary Care. 4th ed. Philadelphia, PA: Elsevier; 2020:chap 214.Morris AE, Adamson R, Frank J. Ultrasonography: principles and basic thoracic and vascular imaging. In: Broadbuss VC, Ernst JD, King TE, et al, eds. Murray and Nadel's Textbook of Respiratory Medicine. 7th ed. Philadelphia, PA: Elsevier; 2022:chap 23.Zhang D, Kahilli K, Yu H, Levine D, eds. Physics of ultrasound. In: Rumack CM, Levine D, eds. Diagnostic Ultrasound. 6th ed. Philadelphia, PA: Elsevier; 2024:chap 1.Page 3Updated by: Jason Levy, MD, FSIR, Northville Radiology Associates, Atlanta, GA. Also reviewed by David C. Dugdale, MD, Medical Director, Brenda Conaway, Editorial Director, and the A.D.A.M. Editorial team. Page 4Boone D, Plumb A, Taylor SA. The large bowel. In: Adam A, Dixon AK, Gillard JH, Schaefer-Prokop CM, eds. Grainger & Allison's Diagnostic Radiology. 7th ed. Philadelphia, PA: Elsevier; 2021:chap 22, Patel SC, May FP, Anderson JC, et al. Updates on age to start and stop colorectal cancer screening: recommendations from the U.S. Multi-Society Task Force on Colorectal Cancer. Gastroenterology. 2022;162(1):285-299. PMID: 34794816 pubmed.ncbi.nlm.nih.gov/34794816/ Rubenstein SE. Barium studies of the small bowel. In: Gore RM, ed. Textbook of Gastrointestinal Radiology. 5th ed. Philadelphia, PA: Elsevier; 2022:chap 24.Shaukat K, Kahi CJ, Burke CA, Rabeneck L, Sauer BG, Rex DK, ACG clinical guidelines: colorectal cancer screening. J Am Gastroenterol. 2021. PMID: 33657038 pubmed.ncbi.nlm.nih.gov/33657038/ US Preventive Services Task Force website. Final recommendation statement. Colorectal cancer screening. www.uspreventiveservicestaskforce.org/uspstf/recommendation/colorectal-cancer-screening. Published May 18, 2021. Accessed July 26, 2024. Page 5Garber JI, Chung CD, eds. Colonic polyps and polypoid syndromes. In: Feldman M, Friedman LS, Brandt LJ, eds. Sleisenger and Fordtran's Gastrointestinal and Liver Disease: Pathophysiology/Diagnosis/Management. 11th ed. Philadelphia, PA: Elsevier; 2021:chap 126.National Cancer Institute website. Colorectal cancer prevention (PDQ) - health professional version. www.cancer.gov/types/colorectal/hp/colorectal-prevention-pdq. Updated March 28, 2024. Accessed July 26, 2024.National Comprehensive Cancer Network website. NCCN clinical practice guidelines in oncology (NCCN guidelines): colorectal cancer screening. Version 1.2024 - February 27, 2024. www.nccn.org/professionals/physician\_gls/pdf/colorectal\_screening.pdf. Updated February 27, 2024. Accessed July 26, 2024. Patel SG, May FP, Anderson JC, et al. Updates on age to start and stop colorectal cancer screening: recommendations from the U.S. Multi-Society Task Force on Colorectal Cancer. Gastroenterology. 2022;162(1):285-299. PMID: 34794816 pubmed.ncbi.nlm.nih.gov/34794816/ Shaikat A, Kahi CJ, Burke CA, Rabeneck L, Sauer BG, Rex DK. ACG clinical guidelines: colorectal cancer screening. JAMA. 2021;116(3):458-479. PMID: 33657038 pubmed.ncbi.nlm.nih.gov/33657038/ US Preventive Services Task Force website. Final recommendation statement. Colorectal cancer screening. www.uspreventiveservicestaskforce.org/uspstf/recommendation/colorectal-cancer-screening. Published May 18, 2021. Accessed July 26, 2024. Page 6Anderson JC, et al. Updates on age to start and stop colorectal cancer screening: recommendations from the U.S. Multi-Society Task Force on Colorectal Cancer. Gastroenterology. 2022;162(1):285-299. PMID: 34794816 pubmed.ncbi.nlm.nih.gov/34794816/ Shaikat A, Kahi CJ, Burke CA, Rabeneck L, Sauer BG, Rex DK. ACG clinical guidelines: colorectal cancer screening. JAMA. 2021;116(3):458-479. PMID: 33657038 pubmed.ncbi.nlm.nih.gov/33657038/ US Preventive Services Task Force website. Final recommendation statement. Colorectal cancer screening. www.uspreventiveservicestaskforce.org/uspstf/recommendation/colorectal-cancer-screening. Published May 18, 2021. Accessed July 26, 2024. Page 7Anderson JC, et al. Updates on age to start and stop colorectal cancer screening: recommendations from the U.S. Multi-Society Task Force on Colorectal Cancer. Gastroenterology. 2022;162(1):285-299. PMID: 34794816 pubmed.ncbi.nlm.nih.gov/34794816/ Shaikat A, Kahi CJ, Burke CA, Rabeneck L, Sauer BG, Rex DK. ACG clinical guidelines: colorectal cancer screening. JAMA. 2021;116(3):458-479. PMID: 33657038 pubmed.ncbi.nlm.nih.gov/33657038/ US Preventive Services Task Force website. Final recommendation statement. Colorectal cancer screening. www.uspreventiveservicestaskforce.org/uspstf/recommendation/colorectal-cancer-screening. Published May 18, 2021. Accessed July 26, 2024. Page 8Anderson JC, et al. Updates on age to start and stop colorectal cancer screening: recommendations from the U.S. Multi-Society Task Force on Colorectal Cancer. Gastroenterology. 2022;162(1):285-299. PMID: 34794816 pubmed.ncbi.nlm.nih.gov/34794816/ Shaikat A, Kahi CJ, Burke CA, Rabeneck L, Sauer BG, Rex DK. ACG clinical guidelines: colorectal cancer screening. JAMA. 2021;116(3):458-479. PMID: 33657038 pubmed.ncbi.nlm.nih.gov/33657038/ US Preventive Services Task Force website. Final recommendation statement. Colorectal cancer screening. www.uspreventiveservicestaskforce.org/uspstf/recommendation/colorectal-cancer-screening. Published May 18, 2021. Accessed July 26, 2024. Page 9Anderson JC, et al. Updates on age to start and stop colorectal cancer screening: recommendations from the U.S. Multi-Society Task Force on Colorectal Cancer. Gastroenterology. 2022;162(1):285-299. PMID: 34794816 pubmed.ncbi.nlm.nih.gov/34794816/ Shaikat A, Kahi CJ, Burke CA, Rabeneck L, Sauer BG, Rex DK. ACG clinical guidelines: colorectal cancer screening. JAMA. 2021;116(3):458-479. PMID: 33657038 pubmed.ncbi.nlm.nih.gov/33657038/ US Preventive Services Task Force website. Final recommendation statement. Colorectal cancer screening. www.uspreventiveservicestaskforce.org/uspstf/recommendation/colorectal-cancer-screening. Published May 18, 2021. Accessed July 26, 2024. Page 10Anderson JC, et al. Updates on age to start and stop colorectal cancer screening: recommendations from the U.S. Multi-Society Task Force on Colorectal Cancer. Gastroenterology. 2022;162(1):285-299. PMID: 34794816 pubmed.ncbi.nlm.nih.gov/34794816/ Shaikat A, Kahi CJ, Burke CA, Rabeneck L, Sauer BG, Rex DK. ACG clinical guidelines: colorectal cancer screening. JAMA. 2021;116(3):458-479. PMID: 33657038 pubmed.ncbi.nlm.nih.gov/33657038/ US Preventive Services Task Force website. Final recommendation statement. Colorectal cancer screening. www.uspreventiveservicestaskforce.org/uspstf/recommendation/colorectal-cancer-screening. Published May 18, 2021. Accessed July 26, 2024. Page 11Anderson JC, et al. Updates on age to start and stop colorectal cancer screening: recommendations from the U.S. Multi-Society Task Force on Colorectal Cancer. Gastroenterology. 2022;162(1):285-299. PMID: 34794816 pubmed.ncbi.nlm.nih.gov/34794816/ Shaikat A, Kahi CJ, Burke CA, Rabeneck L, Sauer BG, Rex DK. ACG clinical guidelines: colorectal cancer screening. JAMA. 2021;116(3):458-479. PMID: 33657038 pubmed.ncbi.nlm.nih.gov/33657038/ US Preventive Services Task Force website. Final recommendation statement. Colorectal cancer screening. www.uspreventiveservicestaskforce.org/uspstf/recommendation/colorectal-cancer-screening. Published May 18, 2021. Accessed July 26, 2024. Page 12Anderson JC, et al. Updates on age to start and stop colorectal cancer screening: recommendations from the U.S. Multi-Society Task Force on Colorectal Cancer. Gastroenterology. 2022;162(1):285-299. PMID: 34794816 pubmed.ncbi.nlm.nih.gov/34794816/ Shaikat A, Kahi CJ, Burke CA, Rabeneck L, Sauer BG, Rex DK. ACG clinical guidelines: colorectal cancer screening. JAMA. 2021;116(3):458-479. PMID: 33657038 pubmed.ncbi.nlm.nih.gov/33657038/ US Preventive Services Task Force website. Final recommendation statement. Colorectal cancer screening. www.uspreventiveservicestaskforce.org/uspstf/recommendation/colorectal-cancer-screening. Published May 18, 2021. Accessed July 26, 2024. Page 13Anderson JC, et al. Updates on age to start and stop colorectal cancer screening: recommendations from the U.S. Multi-Society Task Force on Colorectal Cancer. Gastroenterology. 2022;162(1):285-299. PMID: 34794816 pubmed.ncbi.nlm.nih.gov/34794816/ Shaikat A, Kahi CJ, Burke CA, Rabeneck L, Sauer BG, Rex DK. ACG clinical guidelines: colorectal cancer screening. JAMA. 2021;116(3):458-479. PMID: 33657038 pubmed.ncbi.nlm.nih.gov/33657038/ US Preventive Services Task Force website. Final recommendation statement. Colorectal cancer screening. www.uspreventiveservicestaskforce.org/uspstf/recommendation/colorectal-cancer-screening. Published May 18, 2021. Accessed July 26, 2024. Page 14Anderson JC, et al. Updates on age to start and stop colorectal cancer screening: recommendations from the U.S. Multi-Society Task Force on Colorectal Cancer. Gastroenterology. 2022;162(1):285-299. PMID: 34794816 pubmed.ncbi.nlm.nih.gov/34794816/ Shaikat A, Kahi CJ, Burke CA, Rabeneck L, Sauer BG, Rex DK. ACG clinical guidelines: colorectal cancer screening. JAMA. 2021;116(3):458-479. PMID: 33657038 pubmed.ncbi.nlm.nih.gov/33657038/ US Preventive Services Task Force website. Final recommendation statement. Colorectal cancer screening. www.uspreventiveservicestaskforce.org/uspstf/recommendation/colorectal-cancer-screening. Published May 18, 2021. Accessed July 26, 2024. Page 15Anderson JC, et al. Updates on age to start and stop colorectal cancer screening: recommendations from the U.S. Multi-Society Task Force on Colorectal Cancer. Gastroenterology. 2022;162(1):285-299. PMID: 34794816 pubmed.ncbi.nlm.nih.gov/34794816/ Shaikat A, Kahi CJ, Burke CA, Rabeneck L, Sauer BG, Rex DK. ACG clinical guidelines: colorectal cancer screening. JAMA. 2021;116(3):458-479. PMID: 33657038 pubmed.ncbi.nlm.nih.gov/33657038/ US Preventive Services Task Force website. Final recommendation statement. Colorectal cancer screening. www.uspreventiveservicestaskforce.org/uspstf/recommendation/colorectal-cancer-screening. Published May 18, 2021. Accessed July 26, 2024. Page 16Anderson JC, et al. Updates on age to start and stop colorectal cancer screening: recommendations from the U.S. Multi-Society Task Force on Colorectal Cancer. Gastroenterology. 2022;162(1):285-299. PMID: 34794816 pubmed.ncbi.nlm.nih.gov/34794816/ Shaikat A, Kahi CJ, Burke CA, Rabeneck L, Sauer BG, Rex DK. ACG clinical guidelines: colorectal cancer screening. JAMA. 2021;116(3):458-479. PMID: 33657038 pubmed.ncbi.nlm.nih.gov/33657038/ US Preventive Services Task Force website. Final recommendation statement. Colorectal cancer screening. www.uspreventiveservicestaskforce.org/uspstf/recommendation/colorectal-cancer-screening. Published May 18, 2021. Accessed July 26, 2024. Page 17Anderson JC, et al. Updates on age to start and stop colorectal cancer screening: recommendations from the U.S. Multi-Society Task Force on Colorectal Cancer. Gastroenterology. 2022;162(1):285-299. PMID: 34794816 pubmed.ncbi.nlm.nih.gov/34794816/ Shaikat A, Kahi CJ, Burke CA, Rabeneck L, Sauer BG, Rex DK. ACG clinical guidelines: colorectal cancer screening. JAMA. 2021;116(3):458-479. PMID: 33657038 pubmed.ncbi.nlm.nih.gov/33657038/ US Preventive Services Task Force website. Final recommendation statement. Colorectal cancer screening. www.uspreventiveservicestaskforce.org/uspstf/recommendation/colorectal-cancer-screening. Published May 18, 2021. Accessed July 26, 2024. Page 18Anderson JC, et al. Updates on age to start and stop colorectal cancer screening: recommendations from the U.S. Multi-Society Task Force on Colorectal Cancer. Gastroenterology. 2022;162(1):285-299. PMID: 34794816 pubmed.ncbi.nlm.nih.gov/34794816/ Shaikat A, Kahi CJ, Burke CA, Rabeneck L, Sauer BG, Rex DK. ACG clinical guidelines: colorectal cancer screening. JAMA. 2021;116(3):458-479. PMID: 33657038 pubmed.ncbi.nlm.nih.gov/33657038/ US Preventive Services Task Force website. Final recommendation statement. Colorectal cancer screening. www.uspreventiveservicestaskforce.org/uspstf/recommendation/colorectal-cancer-screening. Published May 18, 2021. Accessed July 26, 2024. Page 19Anderson JC, et al. Updates on age to start and stop colorectal cancer screening: recommendations from the U.S. Multi-Society Task Force on Colorectal Cancer. Gastroenterology. 2022;162(1):285-299. PMID: 34794816 pubmed.ncbi.nlm.nih.gov/34794816/ Shaikat A, Kahi CJ, Burke CA, Rabeneck L, Sauer BG, Rex DK. ACG clinical guidelines: colorectal cancer screening. JAMA. 2021;116(3):458-479. PMID: 33657038 pubmed.ncbi.nlm.nih.gov/33657038/ US Preventive Services Task Force website. Final recommendation statement. Colorectal cancer screening. www.uspreventiveservicestaskforce.org/uspstf/recommendation/colorectal-cancer-screening. Published May 18, 2021. Accessed July 26, 2024. Page 20Anderson JC, et al. Updates on age to start and stop colorectal cancer screening: recommendations from the U.S. Multi-Society Task Force on Colorectal Cancer. Gastroenterology. 2022;162(1):285-299. PMID: 34794816 pubmed.ncbi.nlm.nih.gov/34794816/ Shaikat A, Kahi CJ, Burke CA, Rabeneck L, Sauer BG, Rex DK. ACG clinical guidelines: colorectal cancer screening. JAMA. 2021;116(3):458-479. PMID: 33657038 pubmed.ncbi.nlm.nih.gov/33657038/ US Preventive Services Task Force website. Final recommendation statement. Colorectal cancer screening. www.uspreventiveservicestaskforce.org/uspstf/recommendation/colorectal-cancer-screening. Published May 18, 2021. Accessed July 26, 2024. Page 21Anderson JC, et al. Updates on age to start and stop colorectal cancer screening: recommendations from the U.S. Multi-Society Task Force on Colorectal Cancer. Gastroenterology. 2022;162(1):285-299. PMID: 34794816 pubmed.ncbi.nlm.nih.gov/34794816/ Shaikat A, Kahi CJ, Burke CA, Rabeneck L, Sauer BG, Rex DK. ACG clinical guidelines: colorectal cancer screening. JAMA. 2021;116(3):458-479. PMID: 33657038 pubmed.ncbi.nlm.nih.gov/33657038/ US Preventive Services Task Force website. Final recommendation statement. Colorectal cancer screening. www.uspreventiveservicestaskforce.org/uspstf/recommendation/colorectal-cancer-screening. Published May 18, 2021. Accessed July 26, 2024. Page 22Anderson JC, et al. Updates on age to start and stop colorectal cancer screening: recommendations from the U.S. Multi-Society Task Force on Colorectal Cancer. Gastroenterology. 2022;162(1):285-299. PMID: 34794816 pubmed.ncbi.nlm.nih.gov/34794816/ Shaikat A, Kahi CJ, Burke CA, Rabeneck L, Sauer BG, Rex DK. ACG clinical guidelines: colorectal cancer screening. JAMA. 2021;116(3):458-479. PMID: 33657038 pubmed.ncbi.nlm.nih.gov/33657038/ US Preventive Services Task Force website. Final recommendation statement. Colorectal cancer screening. www.uspreventiveservicestaskforce.org/uspstf/recommendation/colorectal-cancer-screening. Published May 18, 2021. Accessed July 26, 2024. Page 23Anderson JC, et al. Updates on age to start and stop colorectal cancer screening: recommendations from the U.S. Multi-Society Task Force on Colorectal Cancer. Gastroenterology. 2022;162(1):285-299. PMID: 34794816 pubmed.ncbi.nlm.nih.gov/34794816/ Shaikat A, Kahi CJ, Burke CA, Rabeneck L, Sauer BG, Rex DK. ACG clinical guidelines: colorectal cancer screening. JAMA. 2021;116(3):458-479. PMID: 33657038 pubmed.ncbi.nlm.nih.gov/33657038/ US Preventive Services Task Force website. Final recommendation statement. Colorectal cancer screening. www.uspreventiveservicestaskforce.org/uspstf/recommendation/colorectal-cancer-screening. Published May 18, 2021. Accessed July 26, 2024. Page 24Anderson JC, et al. Updates on age to start and stop colorectal cancer screening: recommendations from the U.S. Multi-Society Task Force on Colorectal Cancer. Gastroenterology. 2022;162(1):285-299. PMID: 34794816 pubmed.ncbi.nlm.nih.gov/34794816/ Shaikat A, Kahi CJ, Burke CA, Rabeneck L, Sauer BG, Rex DK. ACG clinical guidelines: colorectal cancer screening. JAMA. 2021;116(3):458-479. PMID: 33657038 pubmed.ncbi.nlm.nih.gov/33657038/ US Preventive Services Task Force website. Final recommendation statement. Colorectal cancer screening. www.uspreventiveservicestaskforce.org/uspstf/recommendation/colorectal-cancer-screening. Published May 18, 2021. Accessed July 26, 2024. Page 25Anderson JC, et al. Updates on age to start and stop colorectal cancer screening: recommendations from the U.S. Multi-Society Task Force on Colorectal Cancer. Gastroenterology. 2022;162(1):285-299. PMID: 34794816 pubmed.ncbi.nlm.nih.gov/34794816/ Shaikat A, Kahi CJ, Burke CA, Rabeneck L, Sauer BG, Rex DK. ACG clinical guidelines: colorectal cancer screening. JAMA. 2021;116(3):458-479. PMID: 33657038 pubmed.ncbi.nlm.nih.gov/33657038/ US Preventive Services Task Force website. Final recommendation statement. Colorectal cancer screening. www.uspreventiveservicestaskforce.org/uspstf/recommendation/colorectal-cancer-screening. Published May 18, 2021. Accessed July 26, 2024. Page 26Anderson JC, et al. Updates on age to start and stop colorectal cancer screening: recommendations from the U.S. Multi-Society Task Force on Colorectal Cancer. Gastroenterology. 2022;162(1):285-299. PMID: 34794816 pubmed.ncbi.nlm.nih.gov/34794816/ Shaikat A, Kahi CJ, Burke CA, Rabeneck L, Sauer BG, Rex DK. ACG clinical guidelines: colorectal cancer screening. JAMA. 2021;116(3):458-479. PMID: 33657038 pubmed.ncbi.nlm.nih.gov/33657038/ US Preventive Services Task Force website. Final recommendation statement. Colorectal cancer screening. www.uspreventiveservicestaskforce.org/uspstf/recommendation/colorectal-cancer-screening. Published May 18, 2021. Accessed July 26, 2024. Page 27Anderson JC, et al. Updates on age to start and stop colorectal cancer screening: recommendations from the U.S. Multi-Society Task Force on Colorectal Cancer. Gastroenterology. 2022;162(1):285-299. PMID: 34794816 pubmed.ncbi.nlm.nih.gov/34794816/ Shaikat A, Kahi CJ, Burke CA, Rabeneck L, Sauer BG, Rex DK. ACG clinical guidelines: colorectal cancer screening. JAMA. 2021;116(3):458-479. PMID: 33657038 pubmed.ncbi.nlm.nih.gov/33657038/ US Preventive Services Task Force website. Final recommendation statement. Colorectal cancer screening. www.uspreventiveservicestaskforce.org/uspstf/recommendation/colorectal-cancer-screening. Published May 18, 2021. Accessed July 26, 2024. Page 28Anderson JC, et al. Updates on age to start and stop colorectal cancer screening: recommendations from the U.S. Multi-Society Task Force on Colorectal Cancer. Gastroenterology. 2022;162(1):285-299. PMID: 34794816 pubmed.ncbi.nlm.nih.gov/34794816/ Shaikat A, Kahi CJ, Burke CA, Rabeneck L, Sauer BG, Rex DK. ACG clinical guidelines: colorectal cancer screening. JAMA. 2021;116(3):458-479. PMID: 33657038 pubmed.ncbi.nlm.nih.gov/33657038/ US Preventive Services Task Force website. Final recommendation statement. Colorectal cancer screening. www.uspreventiveservicestaskforce.org/uspstf/recommendation/colorectal-cancer-screening. Published May 18, 2021. Accessed July 26, 2024. Page 29Anderson JC, et al. Updates on age to start and stop colorectal cancer screening: recommendations from the U.S. Multi-Society Task Force on Colorectal Cancer. Gastroenterology. 2022;162(1):285-299. PMID: 34794816 pubmed.ncbi.nlm.nih.gov/34794816/ Shaikat A, Kahi CJ, Burke CA, Rabeneck L, Sauer BG, Rex DK. ACG clinical guidelines: colorectal cancer screening. JAMA. 2021;116(3):458-479. PMID: 33657038 pubmed.ncbi.nlm.nih.gov/33657038/ US Preventive Services Task Force website. Final recommendation statement. Colorectal cancer screening. www.uspreventiveservicestaskforce.org/uspstf/recommendation/colorectal-cancer-screening. Published May 18, 2021. Accessed July 26, 2024. Page 30Anderson JC, et al. Updates on age to start and stop colorectal cancer screening: recommendations from the U.S. Multi-Society Task Force on Colorectal Cancer. Gastroenterology. 2022;162(1):285-299. PMID: 34794816 pubmed.ncbi.nlm.nih.gov/34794816/ Shaikat A, Kahi CJ, Burke CA, Rabeneck L, Sauer BG, Rex DK. ACG clinical guidelines: colorectal cancer screening. JAMA. 2021;116(3):458-479. PMID: 33657038 pubmed.ncbi.nlm.nih.gov/33657038/ US Preventive Services Task Force website. Final recommendation statement. Colorectal cancer screening. www.uspreventiveservicestaskforce.org/uspstf/recommendation/colorectal-cancer-screening. Published May 18, 2021. Accessed July 26, 2024. Page 31Anderson JC, et al. Updates on age to start and stop colorectal cancer screening: recommendations from the U.S. Multi-Society Task Force on Colorectal Cancer. Gastroenterology. 2022;162(1):285-299. PMID: 34794816 pubmed.ncbi.nlm.nih.gov/34794816/ Shaikat A, Kahi CJ, Burke CA, Rabeneck L, Sauer BG, Rex DK. ACG clinical guidelines: colorectal cancer screening. JAMA. 2021;116(3):458-479. PMID: 33657038 pubmed.ncbi.nlm.nih.gov/33657038/ US Preventive Services Task Force website. Final recommendation statement. Colorectal cancer screening. www.uspreventiveservicestaskforce.org/uspstf/recommendation/colorectal-cancer-screening. Published May 18, 2021. Accessed July 26, 2024. Page 32Anderson JC, et al. Updates on age to start and stop colorectal cancer screening: recommendations from the U.S. Multi-Society Task Force on Colorectal Cancer. Gastroenterology. 2022;162(1):285-299. PMID: 34794816 pubmed.ncbi.nlm.nih.gov/34794816/ Shaikat A, Kahi CJ, Burke CA, Rabeneck L, Sauer BG, Rex DK. ACG clinical guidelines: colorectal cancer screening. JAMA. 2021;116(3):458-479. PMID: 33657038 pubmed.ncbi.nlm.nih.gov/33657038/ US Preventive Services Task Force website. Final recommendation statement. Colorectal cancer screening. www.uspreventiveservicestaskforce.org/uspstf/recommendation/colorectal-cancer-screening. Published May 18, 2021. Accessed July 26, 2024. Page 33Anderson JC, et al. Updates on age to start and stop colorectal cancer screening: recommendations from the U.S. Multi-Society Task Force on Colorectal Cancer. Gastroenterology. 2022;162(1):285-299. PMID: 34794816 pubmed.ncbi.nlm.nih.gov/34794816/ Shaikat A, Kahi CJ, Burke CA, Rabeneck L, Sauer BG, Rex DK. ACG clinical guidelines: colorectal cancer screening. JAMA. 2021;116(3):458-479. PMID: 33657038 pubmed.ncbi.nlm.nih.gov/33657038/ US Preventive Services Task Force website. Final recommendation statement. Colorectal cancer screening. www.uspreventiveservicestaskforce.org/uspstf/recommendation/colorectal-cancer-screening. Published May 18, 2021. Accessed July 26, 2024. Page 34Anderson JC, et al. Updates on age to start and stop colorectal cancer screening: recommendations from the U.S. Multi-Society Task Force on Colorectal Cancer. Gastroenterology. 2022;162(1):285-299. PMID: 34794816 pubmed.ncbi.nlm.nih.gov/34794816/ Shaikat A, Kahi CJ, Burke CA, Rabeneck L, Sauer BG, Rex DK. ACG clinical guidelines: colorectal cancer screening. JAMA. 2021;116(3):458-479. PMID: 33657038 pubmed.ncbi.nlm.nih.gov/33657038/ US Preventive Services Task Force website. Final recommendation statement. Colorectal cancer screening. www.uspreventiveservicestaskforce.org/uspstf/recommendation/colorectal-cancer-screening. Published May 18, 2021. Accessed July 26, 2024. Page 35Anderson JC, et al. Updates on age to start and stop colorectal cancer screening: recommendations from the U.S. Multi-Society Task Force on Colorectal Cancer. Gastroenterology. 2022;162(1):285-299. PMID: 34794816 pubmed.ncbi.nlm.nih.gov/34794816/ Shaikat A, Kahi CJ, Burke CA, Rabeneck L, Sauer BG, Rex DK. ACG clinical guidelines: colorectal cancer screening. JAMA. 2021;116(3):458-479. PMID: 33657038 pubmed.ncbi.nlm.nih.gov/33657038/ US Preventive Services Task Force website. Final recommendation statement. Colorectal cancer screening. www.uspreventiveservicestaskforce.org/uspstf/recommendation/colorectal-cancer-screening. Published May 18, 2021. Accessed July 26, 2024. Page 36Anderson JC, et al. Updates on age to start and stop colorectal cancer screening: recommendations from the U.S. Multi-Society Task Force on Colorectal Cancer. Gastroenterology. 2022;162(1):285-299. PMID: 34794816 pubmed.ncbi.nlm.nih.gov/34794816/ Shaikat A, Kahi CJ, Burke CA, Rabeneck L, Sauer BG, Rex DK. ACG clinical guidelines: colorectal cancer screening. JAMA. 2021;116(3):458-479. PMID: 33657038 pubmed.ncbi.nlm.nih.gov/33657038/ US Preventive Services Task Force website. Final recommendation statement. Colorectal cancer screening. www.uspreventiveservicestaskforce.org/uspstf/recommendation/colorectal-cancer-screening. Published May 18, 2021. Accessed July 26, 2024. Page 37Anderson JC, et al. Updates on age to start and stop colorectal cancer screening: recommendations from the U.S. Multi-Society Task Force on Colorectal Cancer. Gastroenterology. 2022;162(1):285-299. PMID: 34794816 pubmed.ncbi.nlm.nih.gov/34794816/ Shaikat A, Kahi CJ, Burke CA, Rabeneck L, Sauer BG, Rex DK. ACG clinical guidelines: colorectal cancer screening. JAMA. 2021;116(3):458-479. PMID: 33657038 pubmed.ncbi.nlm.nih.gov/33657038/ US Preventive Services Task Force website. Final recommendation statement. Colorectal cancer screening. www.uspreventiveservicestaskforce.org/uspstf/recommendation/colorectal-cancer-screening. Published May 18, 2021. Accessed July 26, 2024. Page 38Anderson JC, et al. Updates on age to start and stop colorectal cancer screening: recommendations from the U.S. Multi-Society Task Force on Colorectal Cancer. Gastroenterology. 2022;162(1):285-299. PMID: 34794816 pubmed.ncbi.nlm.nih.gov/34794816/ Shaikat A, Kahi CJ, Burke CA, Rabeneck L, Sauer BG, Rex DK. ACG clinical guidelines: colorectal cancer screening. JAMA. 2021;116(3):458-479. PMID: 33657038 pubmed.ncbi.nlm.nih.gov/33657038/ US Preventive Services Task Force website. Final recommendation statement. Colorectal cancer screening. www.uspreventiveservicestaskforce.org/uspstf/recommendation/colorectal-cancer-screening. Published May 18, 2021. Accessed July 26, 2024. Page 39Anderson JC, et al. Updates on age to start and stop colorectal cancer screening: recommendations from the U.S. Multi-Society Task Force on Colorectal Cancer. Gastroenterology. 2022;162(1):285-299. PMID: 34794816 pubmed.ncbi.nlm.nih.gov/34794816/ Shaikat A, Kahi CJ, Burke CA, Rabeneck L, Sauer BG, Rex DK. ACG clinical guidelines: colorectal cancer screening. JAMA. 2021;116(3):458-479. PMID: 33657038 pubmed.ncbi.nlm.nih.gov/33657038/ US Preventive Services Task Force website. Final recommendation statement. Colorectal cancer screening. www.uspreventiveservicestaskforce.org/uspstf/recommendation/colorectal-cancer-screening. Published May 18, 2021. Accessed July 26, 2024. Page 40Anderson JC, et al. Updates on age to start and stop colorectal cancer screening: recommendations from the U.S. Multi-Society Task Force on Colorectal Cancer. Gastroenterology. 2022;162(1):285-299. PMID: 34794816 pubmed.ncbi.nlm.nih.gov/34794816/ Shaikat A, Kahi CJ, Burke CA, Rabeneck L, Sauer BG, Rex DK. ACG clinical guidelines: colorectal cancer screening. JAMA. 2021;116(3):458-479. PMID: 33657038 pubmed.ncbi.nlm.nih.gov/33657038/ US Preventive Services Task Force website. Final recommendation statement. Colorectal cancer screening. www.uspreventiveservicestaskforce.org/uspstf/recommendation/colorectal-cancer-screening. Published May 18, 2021. Accessed July 26, 2024. Page 41Anderson JC, et al. Updates on age to start and stop colorectal cancer screening: recommendations from the U.S. Multi-Society Task Force on Colorectal Cancer. Gastroenterology. 2022;162(1):285-299. PMID: 34794816 pubmed.ncbi.nlm.nih.gov/34794816/ Shaikat A, Kahi CJ, Burke CA, Rabeneck L, Sauer BG, Rex DK. ACG clinical guidelines: colorectal cancer screening. JAMA. 2021;116(3):458-479. PMID: 33657038 pubmed.ncbi.nlm.nih.gov/33657038/ US Preventive Services Task Force website. Final recommendation statement. Colorectal cancer screening. www.uspreventiveservicestaskforce.org/uspstf/recommendation/colorectal-cancer-screening. Published May 18, 2021. Accessed July 26, 2024. Page 42Anderson JC, et al. Updates on age to start and stop colorectal cancer screening: recommendations from the U.S. Multi-Society Task Force on Colorectal Cancer. Gastroenterology. 2022;162(1):285-299. PMID: 34794816 pubmed.ncbi.nlm.nih.gov/34794816/ Shaikat A, Kahi CJ, Burke CA, Rabeneck L, Sauer BG, Rex DK. ACG clinical guidelines: colorectal cancer screening. JAMA. 2021;116(3):458-479. PMID: 33657038 pubmed.ncbi.nlm.nih.gov/33657038/ US Preventive Services Task Force website. Final recommendation statement. Colorectal cancer screening. www.uspreventiveservicestaskforce.org/uspstf/recommendation/colorectal-cancer-screening. Published May 18, 2021. Accessed July 26, 2024. Page 43Anderson JC, et al. Updates on age to start and stop colorectal cancer screening: recommendations from the U.S. Multi-Society Task Force on Colorectal Cancer. Gastroenterology. 2022;162(1):285-299. PMID: 34794816 pubmed.ncbi.nlm.nih.gov/34794816/ Shaikat A, Kahi CJ, Burke CA, Rabeneck L, Sauer BG, Rex DK. ACG clinical guidelines: colorectal cancer screening. JAMA. 2021;116(3):458-479. PMID: 33657038 pubmed.ncbi.nlm.nih.gov/33657038/ US Preventive Services Task Force website. Final recommendation statement. Colorectal cancer screening. www.uspreventiveservicestaskforce.org/uspstf/recommendation/colorectal-cancer-screening. Published May 18, 2021. Accessed July 26, 2024. Page 44Anderson JC, et al. Updates on age to start and stop colorectal cancer screening: recommendations from the U.S. Multi-Society Task Force on Colorectal Cancer. Gastroenterology. 2022;162(1):285-299. PMID: 34794816 pubmed.ncbi.nlm.nih.gov/34794816/ Shaikat A, Kahi CJ, Burke CA, Rabeneck L, Sauer BG, Rex DK. ACG clinical guidelines: colorectal cancer screening. JAMA. 2021;116(3):458-479. PMID: 33657038 pubmed.ncbi.nlm.nih.gov/33657038/ US Preventive Services Task Force website. Final recommendation statement. Colorectal cancer screening. www.uspreventiveservicestaskforce.org/uspstf/recommendation/colorectal-cancer-screening. Published May 18, 2021. Accessed July 26, 2024. Page 45Anderson JC, et al. Updates on age to start and stop colorectal cancer screening: recommendations from the U.S. Multi-Society Task Force on Colorectal Cancer. Gastroenterology. 2022;162(1):285-299. PMID: 34794816 pubmed.ncbi.nlm.nih.gov/34794816/ Shaikat A, Kahi CJ, Burke CA, Rabeneck L, Sauer BG, Rex DK. ACG clinical guidelines: colorectal cancer screening. JAMA. 2021;116(3):458-479. PMID: 33657038 pubmed.ncbi.nlm.nih.gov/33657038/ US Preventive Services Task Force website. Final recommendation statement. Colorectal cancer screening. www.uspreventiveservicestaskforce.org/uspstf/recommendation/colorectal-cancer-screening. Published May 18, 2021. Accessed July 26, 2024. Page 46Anderson JC, et al. Updates on age to start and stop colorectal cancer screening: recommendations from the U.S. Multi-Society Task Force on Colorectal Cancer. Gastroenterology. 2022;162(1):285-299. PMID: 34794816 pubmed.ncbi.nlm.nih.gov/34794816/ Shaikat A, Kahi CJ, Burke CA, Rabeneck L, Sauer BG, Rex DK. ACG clinical guidelines: colorectal cancer screening. JAMA. 2021;116(3):458-479. PMID: 33657038 pubmed.ncbi.nlm.nih.gov/33657038/ US Preventive Services Task Force website. Final recommendation statement. Colorectal cancer screening. www.uspreventiveservicestaskforce.org/uspstf/recommendation/colorectal-cancer-screening. Published May 18, 2021. Accessed July 26, 2024. Page 47Anderson JC, et al. Updates on age to start and stop colorectal cancer screening: recommendations from the U.S. Multi-Society