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When to Order a PSA Screen versus a PSA Diagnostic Test

Laboratory tests used for screening purposes are generally not covered by Medicare in the absence of symptoms or personal history of disease except as authorized by the Medicare National Coverage Determinations (NCD) Coding Policy Manual and Change Report.

Medicare allows for a Prostate Specific Antigen (PSA) blood test to be performed for screening purposes once a year on men who are 50 and older. When a Prostate Specific Antigen (PSA) test is requested as part of a yearly routine exam in the absence of symptoms, a PSA SCREEN is ordered. Saint Luke's Regional Laboratories (SLRL) submits the appropriate ICD-10-CM screening code and the Advanced Beneficiary Notice (ABN) provided by the physician to Medicare.

A diagnostic Prostate Specific Antigen blood test (PSA DIAG) is ordered when the ICD-10 code submitted is covered by the Medicare Program, when testing is being performed to confirm or rule out a suspected diagnosis, or when there is an established diagnosis of disease.

Commercial insurance payers do not require Prostate Specific Antigen (PSA) testing performed for screening purposes to be submitted differently than diagnostic testing. A diagnostic Prostate Specific Antigen blood test (PSA DIAG) is ordered for patients who have commercial insurance payers. It is important to remember that both the orderable PSA Screen and PSA Diagnostic tests are performed utilizing the same laboratory test assay and reference ranges. They are the same laboratory test. Choosing the correct orderable test enables SLRL to submit the patient account to Medicare or to the commercial insurance payer for processing using the established ICD-10 code and billing requirements.

Update on Utility of Non-Fasting Lipid Panel

Over the years, numerous prospective clinical trials have established a direct correlation between low-density lipoprotein cholesterol (LDL-C) and cardiovascular health. Therefore, routine measurement of serum LDL-C level is part of cardiovascular health monitoring. Clinical laboratories use either direct or indirect methods to measure serum LDL-C levels. LDL-C is not a specific molecule but a measure of all blood cholesterol contained in lipoproteins with a density between 1.019 and 1.063 g/L. Direct measurement of LDL-C requires blood separation using density gradient, a laborious, time consuming, and costly test routinely not available in clinical laboratories. The most common and rapid method widely used for LDL-C determination is Friedewald formula: $LDL-C = [Total\ cholesterol] - [HDL-C] - [Triglycerides/5]$.

For a very long time, triglycerides levels have been the focus in accurate calculation of serum LDL-C levels. Due to proportionate increase in serum triglyceride levels following fat consumption, analysis of a fasting specimen was considered necessary. However, more recently, data evaluating non-fasting state suggest a clinically insignificant effect on triglyceride levels. Most of these studies have published relatively normal concentrations of triglyceride (<150 mg/dL) even in a non-fasting state. Furthermore, the amount of post-prandial increase in triglyceride levels is shown to be directly proportional to the fasting triglyceride concentration, with median increase ranging from 50-75% in patients with fasting level of >250 mg/dL and 21% increase in those with fasting levels close to 124 mg/dL. These non-fasting serum triglyceride levels appear to fall within the noise of biological and intra-individual variability reported for fasting triglyceride levels (ranging between 20-30%) (*Marcovina SM et. al. Clin Chem 1994;40:574-8*).

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Large studies have also addressed the question of estimated and direct measurement of LDL-C in a non-fasting specimen. To the contrary belief, LDL-C estimated using Friedewald formula were not significantly different from direct measurement (125 mg/dL [interquartile range {IQR} 87-182] versus 115 mg/dL [IQR 91-142], respectively) (*Nordestgaard BG et al Can J Cardiol 2016;32:1263-82 and Sathiyakumar V et al Circulation 2017; doi.org/10.1161/*). Overall, these studies highlight two important factors that minimize the impact of fasting on estimated LDL-C. First, the typical increase in non-fasting triglyceride levels is less than previously assumed. Second, for every 5 mg/dL increase in triglyceride levels, LDL-C decreases by approximately 1 mg/dL. Since most patients appear to have an average increase in non-fasting triglyceride levels of 25 mg/dL, then LDL-C levels are estimated to vary only by 5 mg/dL.

Interestingly, a growing body of evidence studying role of triglycerides is suggesting association of non-fasting triglyceride concentrations to heart disease (*Bansal S et. al. JAMA 2007;298:309-16*). Most of these studies following patients for over a decade show an association of non-fasting triglyceride concentrations with significant increase in adverse cardiac events after adjusting for other factors including age, blood pressure, smoking, and blood cholesterol. No such association however, was observed with fasting triglyceride levels.

Consistent with the above findings the European and British organizations have endorsed a non-fasting lipid panel with a goal of <400 mg/dL non-fasting triglyceride levels, sufficient for routine heart health screening. Repeat measurement of triglycerides using a fasting specimen is recommended only in patients with elevated levels.

American College of Cardiology/American Heart Association recommends a preference of fasting specimen although not required, with a non-fasting triglyceride goal of <200 mg/dL.

At Saint Luke’s Hospital, specimen requirement for lipid panel is 2 – 4 ml serum or plasma, stored and transported at room temperature. Currently, information related to number of hours fasting prior to the draw is not consistently available for reporting with the results.

Respiratory Season 2017-18

Influenza has increased exponentially across the U.S. this season, with the majority of states reporting widespread activity since early January 2018. Multiple non-influenza respiratory viruses are circulating as well. A tally of results from respiratory virus panels performed by Saint Luke’s Microbiology since January 1 show that RSV (respiratory syncytial virus) is the second most common virus detected after influenza. Coronavirus and human metapneumovirus are third & fourth most common, respectively.

Saint Luke’s Laboratories offer a variety of test options for detection of influenza and RSV. Rapid antigen testing is performed by all testing sites. Specimens can also be sent to the central Microbiology laboratory at Saint Luke’s Hospital for respiratory PCR testing. Beginning in December 2017, a combination influenza A/B/RSV PCR is available in addition to the multi-organism respiratory panel and influenza A/B PCR. Optimal utilization of the multi-organism panel is for severely ill, immunocompromised, or transplant patients.

Test Name	Detects	Specimen types	Transport
Flu AB Ag	Influenza A & B	NP/nasal swab Nasal wash	Flocked swab in UTM or M6 Flocked swab in saline Eswab in Amies
Flu PCR	Influenza A & B	NP/nasal swab Nasal wash	Flocked swab in UTM
Flu RSV PCR	Influenza A, B, & RSV	NP/nasal swab	Flocked swab in UTM
Respiratory panel PCR	7 respiratory viruses, Bordetella, Mycoplasma, Chlamydia	NP/nasal swab Nasal wash Bronchoscopy wash/lavage	Flocked swab in UTM or M6

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