Measurement of Small Low Density Lipoprotein Particles

Prospective review is recommended/required. Please check the member agreement for preauthorization guidelines.

Prospective review is not required.

Description:
Measurement of Small Low-Density Lipoprotein (LDL) particle density or diameter has been proposed as a technique to:

- further risk-stratify patients with elevated LDL levels;
- to risk-stratify patients with normal LDL levels, but with other high-risk factors for coronary artery disease; or
- to predict response to therapy.

LDL particle diameter can be measured using ultracentrifugation while density can be measured by gradient gel electrophoresis. Gradient gel electrophoresis (GGE), ultracentrifugation, and nuclear magnetic resonance (NMR) spectroscopy are used to measure lipoproteins.

Medical Criteria:
Not applicable

Policy:
Measurement of small-diameter lipoprotein particles in the management of cardiovascular disease is considered **not medically necessary** as the published data is inadequate to determine how such measurements should guide treatment decisions and whether these treatment decisions result in beneficial patient outcomes.

While the recognition of different subclasses of LDL particles has provided a powerful research tool into the hereditary patterns of coronary artery disease and its pathogenesis, the direct clinical application of measuring small, dense lipoprotein particles is unclear. Specifically, published data is inadequate to determine how such measurements should guide treatment decisions and whether these treatment decisions result in beneficial patient outcomes.
It is also unclear whether measurements of small dense lipoproteins provide additional information regarding risk stratification and treatment selection beyond that provided by the more readily available measurements of other markers of subclass B (e.g., levels of triglyceride, HDL, or IDL).

Coverage:
Measurement of small-diameter lipoprotein particles in the management of cardiovascular disease is considered **not medically necessary**.

Benefits may vary between groups/contracts. Please refer to the appropriate member certificate/subscriber agreement for applicable not medically necessary coverage.

Coding:
83695 83698 83700 83701 83704

Also known as:
VAP

Related Topics:
Not applicable

Published:
*Policy Update*, October 1999
*Policy Update*, December 2004
*Policy Update*, November 2007
*Provider Update*, November 2008
*Provider Update*, August 2009
*Provider Update*, Jan 2011
*Provider Update*, Dec 2011

References:


Otvos JD, Collins D, Freedman DS et al. Low-Density Lipoprotein and High-Density Lipoprotein Particle Subclasses Predict Coronary Events and Are Favorably Changed


Rizzo M, Berneis K. Low-density lipoprotein size and cardiovascular risk assessment. QJ Med 2006;99:1-14

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