**Microalbumin**

**CPT Code** 82043/82570  
**Order Code** C919  
**Sample Type** Urine  
**Tube Type** Yellow Top

**Increased levels of microalbumin may identify:**
- Metabolic syndrome/diabetes
- Kidney disease
- Cardiovascular disease (CVD)

**Microalbumin levels can be reduced by:**
- Lowering blood pressure
- Lowering blood sugar levels

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**Description**

Microalbumin is the quantification of small amounts of albumin, a serum protein, in urine that can be used to identify microvascular endothelial dysfunction. The presence of small amounts of albumin in the urine may suggest the presence of systemic endothelial dysfunction - an early indicator of heart disease. This test is more sensitive than a standard dipstick test routinely performed in an office setting.

**Clinical Use**

Microalbumin may be performed on individuals with type 1 or type 2 diabetes, hypertension, a family history of chronic kidney disease, those at intermediate (10-20%) risk for CVD or those with known vascular disease.

**Clinical Significance**

**Cardiovascular Significance**

- Increases in microalbumin excretion in the 'normal' range (≤30 mg/g) are associated with increased risk for development of cardiovascular morbidity and mortality, as well as all-cause mortality.\(^3\)\(^-\)\(^8\).
- In fact, healthy individuals (defined as non-hypertensive, non-diabetic, and without prevalent CVD) with even minimal microalbumin levels have approximately 3x greater risk for developing cardiovascular disease.\(^9\) These microalbumin levels are gender-specific and are noted to be ≥3.9 mg/g for men and ≥7.5 mg/g for women.
- A linear relationship exists between microalbuminuria and the risk of heart attack, stroke and death.\(^9\)

**Renal Significance**

- The American Diabetes Association has defined microalbuminuria as a microalbumin value of 30-300 mg/g creatinine.\(^1\) A persistent microalbumin of >30 mg/g indicates a loss of kidney function and is used in the diagnosis of chronic kidney disease.\(^2\)

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**Testing Frequency**

Microalbumin testing is determined by an individual's medical history, but may be performed semi-annually or annually as necessary. If the initial test result is abnormal, then follow-up testing may be performed within 3-6 months following treatment.

**Sample Type**

Microalbumin should be performed on a urine sample.

**Commercial Insurance or Medicare Coverage**

Coverage guidelines have not been established or posted by CMS (Medicare & Medicaid). We have reviewed the larger carriers (Aetna, United Healthcare, Cigna, Blues) and information is limited or has not been posted.

**Understanding Medical Necessity**

The following ICD-10 codes for Microalbumin listed below, and in the Cleveland HeartLab Practitioner Guide, are provided as a convenience for the ordering physician. Additional diagnostic codes can be referenced on the CMS website or guidelines specified by insurance carriers. The ordering physician should report the diagnosis code that best describes the reason for performing the test.

<table>
<thead>
<tr>
<th>Diagnosis</th>
<th>Diagnosis Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type 2 Diabetes Mellitus with Hyperglycemia</td>
<td>E11.65</td>
</tr>
<tr>
<td>Type 2 Diabetes Mellitus without Complications</td>
<td>E11.9</td>
</tr>
<tr>
<td>Other Specified Diabetes Mellitus without Complications</td>
<td>E13.9</td>
</tr>
<tr>
<td>Pure Hypercholesterolemia, Unspecified</td>
<td>E78.00</td>
</tr>
<tr>
<td>Familial Hypercholesterolemia</td>
<td>E78.01</td>
</tr>
<tr>
<td>Mixed Hyperlipidemia</td>
<td>E78.2</td>
</tr>
<tr>
<td>Hyperlipidemia, Unspecified</td>
<td>E78.5</td>
</tr>
<tr>
<td>Hyperuricemia without Signs of Inflammatory Arthritis and Tophaceous Disease</td>
<td>E79.0</td>
</tr>
<tr>
<td>Metabolic Syndrome</td>
<td>E88.81</td>
</tr>
<tr>
<td>Essential (Primary) Hypertension</td>
<td>I10</td>
</tr>
<tr>
<td>Atherosclerotic Heart Disease of Native Coronary Artery without Angina Pectoris</td>
<td>I25.10</td>
</tr>
</tbody>
</table>

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**ClevelandHeartLab®**

Know your risk.
References