ADVANCED GLYCATION ENDPRODUCTS (AGEs)
MEASUREMENT BY SKIN AUTOFLUORESCENCE

Description: Advanced glycation endproducts (AGEs) comprise a diverse class of compounds that are formed through nonenzymatic reactions of proteins with sugar residues. Accumulation of AGEs in the body occurs normally over time and is accelerated in the presence of certain diseases. AGEs have been proposed as biomarkers for diagnosis and management of conditions including diabetes, renal failure, heart disease, systemic lupus erythematosus, and in monitoring individuals after solid organ transplantation.

AGEs may be measured through blood or urine sampling. However, these levels do not necessarily reflect tissue AGE levels. Measurement of tissue levels requires a skin biopsy. Spectrographic autofluorescence readers (AFRs) have also been developed to measure skin AGEs for a number of conditions, as some AGEs fluoresce when exposed to specific wavelengths of light. In diabetes diagnosis and management, the system is not intended to replace an oral glucose tolerance test (OGTT), but determines the likelihood that a patient would have an abnormal glucose tolerance test based on the value reported by the device. Unlike the OGTT, no fasting or blood draw is required for measurement of AGEs.

The AGE Reader® (Diagnoptics) and SCOUT DS® (Miraculins) are noninvasive AFRs currently being evaluated. No AFR has received FDA-approval for marketing in the U.S.

Policy: Measurement of advanced glycation endproducts (AGEs) in the skin is considered INVESTIGATIVE for all indications, including but not limited to diabetes, renal failure, cardiac disease, and solid organ transplantation due to the lack of clinical evidence demonstrating its impact on improved health outcomes.

Coverage: Blue Cross and Blue Shield of Minnesota medical policies apply
generally to all Blue Cross and Blue Plus plans and products. Benefit plans vary in coverage and some plans may not provide coverage for certain services addressed in the medical policies.

Medicaid products and some self-insured plans may have additional policies and prior authorization requirements. Receipt of benefits is subject to all terms and conditions of the member’s summary plan description (SPD). As applicable, review the provisions relating to a specific coverage determination, including exclusions and limitations. Blue Cross reserves the right to revise, update and/or add to its medical policies at any time without notice.

For Medicare NCD and/or Medicare LCD, please consult CMS or National Government Services websites.

Refer to the Pre-Certification/Pre-Authorization section of the Medical Behavioral Health Policy Manual for the full list of services, procedures, prescription drugs, and medical devices that require Pre-certification/Pre-Authorization. Note that services with specific coverage criteria may be reviewed retrospectively to determine if criteria are being met. Retrospective denial of claims may result if criteria are not met.

**Coding:**

The following codes are included below for informational purposes only, and are subject to change without notice. Inclusion or exclusion of a code does not constitute or imply member coverage or provider reimbursement.

**CPT:**

0233T Skin advanced glycation endproducts (AGE) measurement by multi-wavelength fluorescent spectroscopy

**Policy History:**

**Developed August 11, 2010**

**Most recent history:**

Reviewed August 10, 2011
Reviewed August 8, 2012
Reviewed August 14, 2013
Reviewed/Updated, no policy statement changes August 13, 2014

**Cross Reference:**

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