Sentara Health Plans

Medicaid

Iron Quantification with Magnetic Resonance Imaging

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Effective Date	7/2013
Next Review Date	3/15/2024
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All requests for authorization for the services described by this medical policy will be reviewed per Early and Periodic Screening, Diagnostic and Treatment (EPSDT) guidelines. These services may be authorized under individual consideration for Medicaid members under the age of 21-years if the services are judged to be medically necessary to correct or ameliorate the member's condition. Department of Medical Assistance Services (DMAS), Supplement B - EPSDT (Early and Periodic Screening, Diagnosis and Treatment) Manual.*.

Purpose:

This policy addresses the medical necessity for Iron Quantification with Magnetic Resonance Imaging.

Description & Definitions:

Magnetic resonance iron quantification is a non-invasive imaging study that quantifies the concentration of iron within the liver and additional storage organs, a key indicator in the management of patients with hemochromatosis. Other names for Iron Quantification with Magnetic Resonance Imaging include but are not limited to, Liver iron concentration (LIC) imaging companion diagnostic, FerriScan, R2 MRI, liver iron concentration MRI, R2 Relaxometry, Liversmart, FerriSmart, Liver MRI T2 and LiverMultiScan.

Criteria:

Iron Quantification with Magnetic Resonance Imaging is considered medically necessary with **1 or more** of the following:

- Individual is under 21 years of age with **ALL** of the following:
  - Individual is a candidate for chelation therapy.
  - Laboratory tests (e.g. serum ferritin, serum transferrin, etc.) are not sufficient to determine an appropriate treatment plan and the results of the scan will directly impact the treatment provided to the individual.
  - Individual has diagnosis of **1 or more** of the following:
    - Hereditary Hemochromatosis with **1 or more** of the following:
      - Individual's serum ferritin level is greater than or equal to 1000 ng/ml (demonstrated within the last 12 months).
      - Individual's transferrin saturation (TSAT) level is greater than 45%.
    - Myelodysplastic Syndrome with **ALL of the following**:

                - Individual's serum ferritin level is greater than or equal to 1000 ng/ml (demonstrated within the last 12 months).
                - Individual has received more than 20 units of packed red blood cells from long term transfusion therapy.
            - Porphyrin metabolism disorder in which the serum ferritin level is greater than 25 ng/ml (demonstrated within the last 12 months)
            - Sickle Cell Disease with **ALL of the following**:
                - Individual is over the age of 2 years old.
                - Individual's serum ferritin level is greater than or equal to 1000 ng/ml (demonstrated within the last 12 months).
                - Individual has received more than 20 units of packed red blood cells from long term transfusion therapy.
            - Thalassemia Major with **All of the following**:
                - Individual is over the age of 2 years old.
                - Individual's serum ferritin level is greater than or equal to 1000 ng/ml (demonstrated within the last 12 months).
                - Individual has received more than 10 units of packed red blood cells from long term transfusion therapy.
            - Thalassemia Intermedia with **All of the Following**:
                - Individual is over the age of 4 years old
                - Individual's serum ferritin level is greater than or equal to 400 ng/ml (demonstrated within the last 12 months).
- Individual is 21 years of age or older with **All of the following**:
    - Individual has a documented contraindication to liver biopsy.
    - Individual is a candidate for chelation therapy.
    - Laboratory tests (e.g. serum ferritin, serum transferrin, etc.) are not sufficient to determine an appropriate treatment plan and the results of the scan will directly impact the treatment provided to the individual.
    - Individual has **1 or more of the following:**
        - Hereditary Hemochromatosis with **1 or more** of the following:
            - Individual's serum ferritin level is greater than or equal to 1000 ng/ml (demonstrated within the last 12 months).
            - Individual's transferrin saturation (TSAT) level is greater than 45%.
        - Myelodysplastic Syndrome with **ALL** of the following:
            - Individual's serum ferritin level is greater than or equal to 1000 ng/ml (demonstrated within the last 12 months).
            - Individual has received more than 20 units of packed red blood cells from long term transfusion therapy.
        - Porphyrin metabolism disorder in which the serum ferritin level is greater than 25 ng/ml (demonstrated within the last 12 months).
        - Sickle Cell Disease with **ALL** of the following:
            - Individual's serum ferritin level is greater than or equal to 1000 ng/ml (demonstrated within the last 12 months).
            - Individual has received more than 20 units of packed red blood cells from long term transfusion therapy.
        - Thalassemia Major with **ALL** of the following:
            - Individual's serum ferritin level is greater than or equal to 1000 ng/ml (demonstrated within the last 12 months).
            - Individual has received more than 10 units of packed red blood cells from long term transfusion therapy.
        - Thalassemia Intermedia with a serum ferritin level greater than or equal to 400 ng/ml (demonstrated within the last 12 months).

Iron Quantification with Magnetic Resonance Imaging is considered **not medically necessary** for uses other than those listed in the clinical criteria.

Coding:

Medically necessary with criteria:

Coding	Description
0648T	Quantitative magnetic resonance for analysis of tissue composition (eg, fat, iron, water content), including multiparametric data acquisition, data preparation and transmission, interpretation and report, obtained without diagnostic MRI examination of the same anatomy (eg, organ, gland, tissue, target structure) during the same session; single organ
0649T	Quantitative magnetic resonance for analysis of tissue composition (eg, fat, iron, water content), including multiparametric data acquisition, data preparation and transmission, interpretation and report, obtained with diagnostic MRI examination of the same anatomy (eg, organ, gland, tissue, target structure); single organ (List separately in addition to code for primary procedure)
0697T	Quantitative magnetic resonance for analysis of tissue composition (eg, fat, iron, water content), including multiparametric data acquisition, data preparation and transmission, interpretation and report, obtained without diagnostic MRI examination of the same anatomy (eg, organ, gland, tissue, target structure) during the same session; multiple organs
0698T	Quantitative magnetic resonance for analysis of tissue composition (eg, fat, iron, water content), including multiparametric data acquisition, data preparation and transmission, interpretation and report, obtained with diagnostic MRI examination of the same anatomy (eg, organ, gland, tissue, target structure); multiple organs (List separately in addition to code for primary procedure)
76498	Unlisted magnetic resonance procedure (eg, diagnostic, interventional)

Considered Not Medically Necessary:

Coding	Description
	None

U.S. Food and Drug Administration (FDA) - approved only products only.

Document History:

Revised Dates:

- 2022: April, May
- 2019: October
- 2015: December

Reviewed Dates:

- 2023: March
- 2021: May
- 2020: June
- 2019: January
- 2018: January
- 2017: February
- 2016: March
- 2015: November
- 2013: November

Effective Date:

- July 2013

References:

Including but not limited to: Specialty Association Guidelines; Government Regulations; Winifred S. Hayes, Inc; UpToDate; Literature Review; Specialty Advisors; National Coverage Determination (NCD); Local Coverage Determination (LCD).

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Special Notes: *

This medical policy express Sentara Health Plan's determination of medically necessity of services, and they are based upon a review of currently available clinical information. These policies are used when no specific guidelines for coverage are provided by the Department of Medical Assistance Services of Virginia (DMAS). Medical Policies may be superseded by state Medicaid Plan guidelines. Medical policies are not a substitute for clinical judgment or for any prior authorization requirements of the health plan. These policies are not an explanation of benefits.

Medical policies can be highly technical and complex and are provided here for informational purposes. These medical policies are intended for use by health care professionals. The medical policies do not constitute medical advice or medical care. Treating health care professionals are solely responsible for diagnosis, treatment and medical advice. Sentara Health Plan members should discuss the information in the medical policies with their treating health care professionals. Medical technology is constantly evolving and these medical policies are subject to change without notice, although Sentara Health Plan will notify providers as required in advance of changes that could have a negative impact on benefits.

The Early and Periodic Screening, Diagnostic and Treatment (EPSDT) covers services, products, or procedures for children, if those items are determined to be medically necessary to "correct or ameliorate" (make better) a defect, physical or mental illness, or condition (health problem) identified through routine medical screening or examination, regardless of whether coverage for the same service or support is an optional or limited service under the state plan. Children enrolled in the FAMIS Program are not eligible for all EPSDT treatment services. All requests for authorization for the services described by this medical policy will be reviewed per EPSDT guidelines. These services may be authorized under individual consideration for Medicaid members under the age of 21-years if the services are judged to by medically necessary to correct or ameliorate the member's condition. *Department of Medical Assistance Services (DMAS), Supplement B - EPSDT (Early and Periodic Screening, Diagnosis and Treatment) Manual.*

Keywords:

SHP Iron Quantification with Magnetic Resonance, SHP Imaging 16, MRI, chelation therapy, Hereditary Hemochromatosis, Myelodysplastic Syndrome, Porphyrin metabolism disorder, Sickle Cell Disease, Thalassemia Major, Thalassemia Intermedia, liver biopsy, serum ferritin, serum transferrin, Liver MRI T2, LiverMultiScan, FerriScan R2 Magnetic Resonance Imaging Analysis, Liver iron concentration (LIC) imaging companion diagnostic, FerriScan, R2 MRI, liver iron concentration MRI, R2 Relaxometry, Liversmart, FerriSmart