

# SPECIALTY GUIDELINE MANAGEMENT

## SOGROYA (somapacitan-beco)

### POLICY

#### I. INDICATIONS

The indications below including FDA-approved indications and compendial uses are considered a covered benefit provided that all the approval criteria are met and the member has no exclusions to the prescribed therapy.

##### FDA-Approved Indication

Sogroya is indicated for the replacement of endogenous growth hormone (GH) in adults with growth hormone deficiency (GHD).

All other indications are considered experimental/investigational and not medically necessary.

#### II. REQUIRED DOCUMENTATION

The following information is necessary to initiate the prior authorization review for both initial and continuation or therapy requests, if applicable:

- A. Pretreatment pharmacologic provocative tests
- B. Pretreatment and/or current IGF-1 level\*

\* IGF-1 levels vary based on the laboratory performing the analysis. Laboratory-specific values must be provided to determine whether the value is within the normal range.

#### III. CRITERIA FOR INITIAL APPROVAL

##### **Adult Growth Hormone Deficiency**

Authorization of 12 months may be granted to members with adult GH deficiency when ANY of the following criteria is met:

- A. Member meets both of the following:
  - 1. Member has had 2 pretreatment pharmacologic provocative GH tests and both results demonstrated deficient GH responses defined as the following:
    - a. Insulin tolerance test (ITT) with a peak GH level  $\leq 5$  ng/mL
    - b. Macrilen with a peak GH level of less than 2.8 ng/mL
    - c. Glucagon stimulation test with a peak GH level  $\leq 3.0$  ng/mL in patients with a body mass index (BMI)  $\leq 30$  kg/m<sup>2</sup> and a high pretest probability (e.g., acquired structural abnormalities) OR a BMI  $< 25$  kg/m<sup>2</sup>
    - d. Glucagon stimulation test with a peak GH level  $\leq 1.0$  ng/mL in patients with a BMI of  $\geq 25$  kg/m<sup>2</sup> and a low pretest probability of GHD (e.g., acquired structural abnormalities) OR a BMI  $> 30$  kg/m<sup>2</sup>
  - 2. Member has a low pre-treatment IGF-1 (between 0 to 2 SD below the mean)
- B. Member meets both of the following:
  - 1. Member has had 1 pretreatment pharmacologic provocative GH test that demonstrated deficient GH responses defined as one of the following:
    - a. Insulin tolerance test (ITT) with a peak GH level  $\leq 5$  ng/mL

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- b. Macrilen with a peak GH level of less than 2.8 ng/mL
  - c. Glucagon stimulation test with a peak GH level  $\leq 3.0$  ng/mL in patients with a body mass index (BMI)  $\leq 30$  kg/m<sup>2</sup> and a high pretest probability of GHD (e.g., acquired structural abnormalities) OR a BMI  $< 25$  kg/m<sup>2</sup>
  - d. Glucagon stimulation test with a peak GH level  $\leq 1.0$  ng/mL in patients with a BMI of  $\geq 25$  kg/m<sup>2</sup> and a low pretest probability of GHD (e.g., acquired structural abnormalities) OR a BMI  $> 30$  kg/m<sup>2</sup>
2. Member has a pretreatment IGF-1 level that is more than 2 SD below the mean
- C. Member has organic hypothalamic-pituitary disease (e.g., suprasellar mass with previous surgery and cranial irradiation) with  $\geq 3$  documented pituitary hormone deficiencies (refer to Appendix A) and a low pre-treatment IGF-1 more than 2 standard deviations below the mean for age and gender
  - D. Member has genetic or structural hypothalamic-pituitary defects (refer to Appendix B)
  - E. Member has childhood-onset GH deficiency and a congenital abnormality of the CNS, hypothalamus or pituitary (refer to Appendix B)

#### IV. CONTINUATION OF THERAPY

##### Adult Growth Hormone Deficiency

Authorization of 12 months may be granted for continuation of therapy when ANY of the following criteria is met:

- A. Member meets all of the following:
  - 1. Member has had 2 pretreatment pharmacologic provocative GH tests and both results demonstrated deficient GH responses defined as the following:
    - a. Insulin tolerance test (ITT) or another provocative GH test with a peak GH level  $\leq 5$  ng/mL
    - b. Macrilen with a peak GH level of less than 2.8 ng/ml
    - c. Glucagon stimulation test with a peak GH level  $\leq 3.0$  ng/mL in patients with a body mass index (BMI)  $\leq 30$  kg/m<sup>2</sup> and a high pretest probability (e.g., acquired structural abnormalities) OR a BMI  $< 25$  kg/m<sup>2</sup>
    - d. Glucagon stimulation test with a peak GH level  $\leq 1.0$  ng/mL in patients with a BMI of  $\geq 25$  kg/m<sup>2</sup> and a low pretest probability of GHD (e.g., acquired structural abnormalities) OR a BMI  $> 30$  kg/m<sup>2</sup>
  - 2. Member has a low pre-treatment IGF-1 (between 0 to 2 SD below the mean)
  - 3. Current IGF-1 level is not elevated for age and gender
- B. Member meets all of the following:
  - 1. Member has had 1 pretreatment pharmacologic provocative GH test that demonstrated deficient GH responses defined as one of the following:
    - a. Insulin tolerance test (ITT) or another provocative GH test with a peak GH level  $\leq 5$  ng/mL
    - b. Macrilen with a peak GH level of less than 2.8 ng/mL
    - c. Glucagon stimulation test with a peak GH level  $\leq 3.0$  ng/mL in patients with a body mass index (BMI)  $\leq 30$  kg/m<sup>2</sup> and a high pretest probability of GHD (e.g., acquired structural abnormalities) OR a BMI  $< 25$  kg/m<sup>2</sup>
    - d. Glucagon stimulation test with a peak GH level  $\leq 1.0$  ng/mL in patients with a BMI of  $\geq 25$  kg/m<sup>2</sup> and a low pretest probability of GHD (e.g., acquired structural abnormalities) OR a BMI  $> 30$  kg/m<sup>2</sup>
  - 2. Member has a pretreatment IGF-1 level that is more than 2 SD below the mean
  - 3. Current IGF-1 level is not elevated for age and gender
- C. Member meets both of the following:
  - 1. Member has organic hypothalamic-pituitary disease (e.g., suprasellar mass with previous surgery and cranial irradiation) with  $\geq 3$  documented pituitary hormone deficiencies (refer to Appendix A) and a low pre-treatment IGF-1 more than 2 standard deviations below the mean for age and gender
  - 2. Current IGF-1 level is not elevated for age and gender

- D. Member has genetic or structural hypothalamic-pituitary defects (refer to Appendix B) and current IGF-1 level is not elevated for age and gender
- E. Member has childhood-onset GH deficiency and a congenital abnormality of the CNS, hypothalamus or pituitary (refer to Appendix B) and current IGF-1 level is not elevated for age and gender

## V. APPENDICES

### A. Appendix A: Pituitary Hormones (Other than Growth Hormone)

- 1. Adrenocorticotrophic hormone (ACTH)
- 2. Antidiuretic hormone (ADH)
- 3. Follicle stimulating hormone (FSH)
- 4. Luteinizing hormone (LH)
- 5. Thyroid stimulating hormone (TSH)
- 6. Prolactin

### B. Appendix B: Requirements for GH-Stimulation Testing in Adults

- 1. Testing for adult GHD is not required
  - a. Three or more pituitary hormone deficiencies and low IGF-1
  - b. Congenital structural abnormalities
    - i. Transcription factor defects (PIT-1, PROP-1, LHX3/4, HESX-1, PITX-2)
    - ii. GHRH receptor-gene defects
    - iii. GH-receptor/post-receptor defects
    - iv. GH-gene defects associated with brain structural defects
    - v. Single central incisor
    - vi. Cleft lip/palate
  - c. Acquired causes such as perinatal insults
- 2. Testing for adult GHD is required
  - a. Acquired
    - i. Skull-base lesions
    - ii. Pituitary adenoma
    - iii. Craniopharyngioma
    - iv. Rathke's cleft cyst
    - v. Meningioma
    - vi. Glioma/astrocytoma
    - vii. Neoplastic sellar and parasellar lesions
    - viii. Chordoma
    - ix. Hamartoma
    - x. Lymphoma
    - xi. Metastases
    - xii. Other brain injury
    - xiii. Traumatic brain injury
    - xiv. Sports-related head trauma
    - xv. Blast injury
    - xvi. Infiltrative/granulomatous disease
    - xvii. Langerhans cell histiocytosis
    - xviii. Autoimmune hypophysitis (primary or secondary)
    - xix. Sarcoidosis
    - xx. Tuberculosis
    - xxi. Amyloidosis
  - b. Surgery to the sella, suprasellar, and parasellar region
  - c. Cranial irradiation

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- d. Central nervous system infections (bacteria, viruses, fungi, parasites)
- e. Infarction/hemorrhage (e.g., apoplexy, Sheehan's syndrome)
- f. Empty sella
- g. Hydrocephalus
- h. Idiopathic

## VI. REFERENCES

1. Sogroya [package insert]. Plainsboro, NJ: Novo Nordisk, Inc; August 2020.
2. U.S. National Library of Medicine. ClinicalTrials.gov. Trial to Compare the Efficacy and Safety of NNC0195-0092 (Somapacitan) With Placebo and Norditropin FlexPro (Somatropin) in Adults With Growth Hormone Deficiency (REAL 1). <https://clinicaltrials.gov/ct2/show/study/NCT02229851>. Accessed 09/04/2020.
3. American Association of Clinical Endocrinologists Growth Hormone Task Force. Medical guidelines for clinical practice for growth hormone use in adults and children 2003 Update. *Endocr Pract.* 2003;9(1):64-76.
4. Molitch ME, Clemmons DR, Malozowski S, et al. Evaluation and treatment of adult growth hormone deficiency: an Endocrine Society clinical practice guideline. *J Clin Endocrinol Metab.* 2011;96:1587-1609.
5. American Association of Clinical Endocrinologists. Medical guidelines for clinical practice for growth hormone use in growth hormone-deficient adults and transition patients 2009 update. *Endocr Pract.* 2009;15(2):1-28.
6. National Institute for Clinical Excellence: Human growth hormone (somatropin) in adults with growth hormone deficiency. August 2003.
7. Yuen KCJ, Biller BMK, Radovick S, et al. American Association of Clinical Endocrinologists and American College of Endocrinology guidelines for management of growth hormone deficiency in adults and patients transitioning from pediatric to adult care. *Endocr Pract.* 2019; 25: 1191-1232