PRIOR AUTHORIZATION POLICY

POLICY: Growth Disorders – Ngenla Prior Authorization Policy
- Ngenla® (somatrogon-ghla subcutaneous injection – Pfizer)

REVIEW DATE: 06/12/2024

OVERVIEW

Ngenla, a human growth hormone (hGH) product, is indicated for the treatment of **growth failure due to inadequate secretion of growth hormone (GH)** in pediatric patients ≥ 3 years of age.[1]

Disease Overview

Ngenla is a hGH analog, which is made up of the amino acid sequence of hGH with an added three copies of the C-terminal peptide of human chorionic gonadotropin.[1] The addition of the C-terminal peptides leads to a longer half-life. Ngenla binds to the GH receptor, which initiates changes in growth and metabolism. In children with GH deficiency (GHD), somatropin is effective for increasing final adult height.[2] Somatropin therapy is recommended to normalize adult height and prevent extreme shortness in children and adolescents with GHD. In addition to congenital causes, hypopituitarism may also be caused by radiation therapy; somatropin may be used to improve final height of children who have undergone radiation.[3,4]

Guidelines

Current guidelines do not specifically address Ngenla. Neither the Pediatric Endocrine Society guidelines for children and adolescents with GHD[2] (2016) nor the GH Research Society guidelines on children with short stature[11] (2019) recommend a specific GH product for GHD. Guidelines recommend the use of GH to normalize adult height and prevent extreme shortness in pediatric patients with GHD.

POLICY STATEMENT

Prior Authorization is recommended for prescription benefit coverage of Ngenla. All reviews will be directed to a clinician (i.e., pharmacist) for verification of criteria. All approvals are provided for the duration noted below. Because of the specialized skills required for evaluation and diagnosis of patients treated with Ngenla as well as monitoring required for adverse events and long-term efficacy, initial approval requires the patient to be evaluated by a physician who specializes in the condition being treated. hGH is FDA-approved for treatment of a limited number of conditions. The FDA has <u>not</u> approved the use of hGH as therapy for anti-aging, longevity, or cosmetic or performance enhancement. Federal law prohibits the dispensing of hGH for non-approved purposes. A pharmacy's failure to comply with that law could result in significant criminal penalties to the pharmacy and its employees. Accordingly, a pharmacy may decline to dispense prescriptions for hGH when written by a physician or other authorized prescribers who they believe may be involved in or affiliated with the fields of anti-aging, longevity, rejuvenation, cosmetic, performance enhancement, or sports medicine.

<u>Automation</u>: None.

RECOMMENDED AUTHORIZATION CRITERIA

Coverage of Ngenla is recommended in those who meet the following criteria:

FDA-Approved Indication

1. **Growth Hormone Deficiency in a Pediatric Patient (≥ 3 years of age to < 18 years of age).** Approve for 1 year if the patient meets ONE of the following (A or B):
   - **A)** Initial Therapy with any Growth Hormone Agent. Approve if the patient meets ONE of the following (i, ii, iii, iv, or v):
     - **i.** Patient meets BOTH of the following (a and b):
       - **a)** Patient meets at least ONE of the following [(1) or (2)]:
         - **(1)** Patient has had two growth hormone stimulation tests performed with any of the following agents: levodopa, insulin-induced hypoglycemia, arginine, clonidine, or glucagon AND the peak growth hormone response to both tests are < 10 ng/mL; OR
         - **(2)** Patient meets BOTH of the following [(a) and (b)]:
           - **(a)** Patient has had at least one growth hormone stimulation test performed with any of the following agents: levodopa, insulin-induced hypoglycemia, arginine, clonidine, or glucagon AND the peak growth hormone response to at least one test is < 10 ng/mL; AND
           - **(b)** Patient has at least one risk factor for growth hormone deficiency; AND
             Note: Examples of at least one risk factor for growth hormone deficiency includes: the height for age curve has deviated downward across two major height percentiles (e.g., from above the 25th percentile to below the 10th percentile); the child's growth rate is less than the expected normal growth rate based on age and gender; low insulin-like growth factor (IGF)-1 and/or IGFBP-3 levels; the child has a very low peak growth hormone level on provocative testing as defined by the prescribing physician; the child's growth velocity is less than the 10th percentile for age and gender (height velocity percentile is NOT the same as height-for-age percentile); the patient is status post craniopharyngioma resection; the patient has optic nerve hypoplasia; the patient has a growth hormone gene deletion; AND
       - **b)** Patient has been evaluated by an endocrinologist.
     - **ii.** Patient has undergone brain radiation or tumor resection AND meets BOTH of the following (a and b):
       - **a)** Patient meets at least ONE of the following [(1) or (2)]:
         - **(1)** Patient meets BOTH of the following [(i) and (ii)]:
           - **(i)** Patient has had one growth hormone stimulation test with any of the following agents: levodopa, insulin-induced hypoglycemia, arginine, clonidine, or glucagon; AND
           - **(ii)** The peak growth hormone response to at least one test is < 10 ng/mL; OR
         - **(2)** Patient has a deficiency in at least one other pituitary hormone (i.e., adrenocorticotropic hormone, thyroid-stimulating hormone, gonadotropin [luteinizing hormone and/or follicle stimulating hormone deficiency are counted as one deficiency], or prolactin); AND
       - **b)** Patient has been evaluated by an endocrinologist.
     - **iii.** Patient has congenital hypopituitarism AND meets BOTH of the following (a and b):
       - **a)** Patient meets at least ONE of the following [(1), (2), or (3)]:
         - **(1)** Patient meets BOTH of the following [(i) and (ii)]:
           - **(i)** Patient has had one growth hormone stimulation test with any of the following agents: levodopa, insulin-induced hypoglycemia, arginine, clonidine, or glucagon; AND

(ii) The peak growth hormone response to at least one test is < 10 ng/mL; OR

(2) Patient has a deficiency in at least one other pituitary hormone (i.e., adrenocorticotropic hormone, thyroid-stimulating hormone, gonadotropin [luteinizing hormone and/or follicle stimulating hormone deficiency are counted as one deficiency], or prolactin); OR

(3) Patient has the imaging triad of ectopic posterior pituitary and pituitary hypoplasia with abnormal pituitary stalk; AND

b) Patient has been evaluated by an endocrinologist.

iv. Patient has multiple pituitary hormone deficiencies and meets BOTH of the following (a and b):

Note: Growth hormone deficiency may occur in combination with other pituitary hormone deficiencies and is referred to as hypopituitarism, panhypopituitarism, or multiple pituitary hormone deficiency.

a) Patient meets at least ONE of the following [(1) or (2)]:

(1) Patient has three or more of the following pituitary hormone deficiencies: somatropin (growth hormone), adrenocorticotropic hormone, thyroid-stimulating hormone, gonadotropin (luteinizing hormone and/or follicle stimulating hormone deficiency are counted as one deficiency), and prolactin; OR

(2) Patient meets BOTH of the following [(i) and (ii)]:

(i) Patient has had one growth hormone stimulation test with any of the following agents: levodopa, insulin-induced hypoglycemia, arginine, clonidine, or glucagon; AND

(ii) The peak growth hormone response to at least one test is < 10 ng/mL; AND

b) Patient has been evaluated by an endocrinologist.

v. Patient has had a hypophysectomy (surgical removal of pituitary gland).

B) Patient is Currently Receiving Ngenla or is switching to Ngenla from another Growth Hormone Agent (Patient has been established on either therapy for ≥ 10 months). Approve if the patient meets ONE of the following (i or ii):

i. Patient is < 12 years of age: Patient's height has increased by ≥ 2 cm/year in the most recent year; OR

ii. Patient is ≥ 12 years of age and < 18 years of age: Patient meets BOTH of the following (a and b):

a) Patient's height has increased by ≥ 2 cm/year in the most recent year; AND

b) Patient's epiphyses are open.

CONDITIONS NOT RECOMMENDED FOR APPROVAL

Coverage of Ngenla is not recommended in the following situations:

1. **Athletic Ability Enhancement.**[5] Somatropin and related agents are not FDA-approved for athletic performance enhancement or for body building in non-athletes. Federal law prohibits the distribution or dispensing of somatropin or related agents for non-FDA approved uses.

2. **Central Precocious Puberty (CPP).** Children with precocious puberty are often treated with gonadotropin releasing hormone (GnRH) agonists (Lupron® [leuprolide acetate injection]) to suppress pituitary gonadal activity, to slow the advancement of bone age (prevent premature fusion of the epiphyseal growth plates), and to improve adult height. There are some limited studies which have shown somatropin given in combination with a GnRH analog for patients with CPP and low predicted adult height has been associated with height increases.[6,7] There are no large well-controlled trials on the efficacy and safety of adding somatropin to GnRH agonist therapy in a patient with CPP.

3. **Congenital Adrenal Hyperplasia (CAH).**[8,9] The Endocrine Society clinical practice guidelines on CAH due to steroid 21-hydroxylase deficiency recommend against the use of experimental treatment approaches outside of formally approved clinical trials.[9] Children with predicted adult height standard deviation ≤ -2.25 may be considered for growth-promoting treatments in appropriately controlled trials.

4. **Constitutional Delay of Growth and Puberty.** These children have delayed skeletal maturation and pubertal development. Administering somatropin does not increase adult height (which is usually normal).[10] Short-term androgen therapy accelerates growth and the rate of pubertal advancement in boys.

5. Coverage is not recommended for circumstances not listed in the Recommended Authorization Criteria. Criteria will be updated as new published data are available.

REFERENCES

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