

Clinical Policy: Somatropin (Human Growth Hormone)

Reference Number: CP.HNOR.82

Effective Date: 11.16.16 Last Review Date: 01.10.2020

Line of Business: Commercial - HNOR

Revision Log

See <u>Important Reminder</u> at the end of this policy for important regulatory and legal information.

Description

The following are recombinant human growth hormones requiring prior authorization: somatropin (Genotropin[®], Genotropin Miniquick[®], Humatrope[®], Humatrope Combo Pack[®], Norditropin FlexPro[®], Nutropin AQ NuSpin[®], Omnitrope[®], Saizen[®], Serostim[®], Zomacton[™], Zorbtive[™]).

| Drugs | Children | | | | | | Adults | | | | |
|-------------|----------|-----|-------|----|-------|-----|--------|-------|-----|-----|-----|
| | GHD | PWS | TS | NS | SHOX | CKD | SGA | ISS | GHD | HIV | SBS |
| Genotropin | GF | GF | GF | | | | GF | GF | X | | |
| Humatrope | SS/GF | | SS/GF | | SS/GF | | SS/GF | SS/GF | X | | |
| Norditropin | GF | GF | SS | SS | | | SS | SS | X | | |
| NutropinAQ | GF | | GF | | | GF | | GF | X | | |
| Omnitrope | GF | GF | GF | | | | GF | GF | X | | |
| Saizen | GF | | | | | | | | X | | |
| Serostim | | | | | | | | | | X | |
| Zomacton | GF | | SS | | SS | | SS | SS | X | | |
| Zorbtive | | | | | | | | | | | X |

Abbreviations: CKD: chronic kidney disease, GF: growth failure, GHD: growth hormone deficiency, HIV: human immunodeficiency virus, ISS: idiopathic short stature, NS: Noonan syndrome, PWS: Prader-Willi syndrome, SBS: short bowel syndrome, SGA: small for gestational age, SHOX: short stature homeobox-containing gene, SS: short stature, TS: Turner syndrome

FDA approved indication(s)

Genotropin is indicated for treatment of:

- Children with GF due to GHD, PWS, SGA, TS, and ISS.
- Adults with either childhood-onset (CO) or adult-onset (AO) GHD.

Humatrope is indicated for treatment of:

- Children with SS or GF associated with GHD, TS, ISS, SHOX deficiency, and failure to catch up in height after SGA birth.
- Adults with either CO or AO GHD.

Norditropin FlexPro is indicated for the treatment of:

- Children with GF due to GHD, SS associated with NS, SS associated with TS, SS born SGA with no catch-up growth by age 2 to 4 years, ISS, and GF due to PWS.
- Adults with either CO or AO GHD.

Nutropin AQ is indicated for the treatment of:

- Children with GF due to GHD, ISS, TS, and CKD up to the time of renal transplantation.
- Adults with either CO or AO GHD.

Omnitrope is indicated for the treatment of:

- Children with GF due to GHD, PWS, SGA, TS, and ISS.
- Adults with either CO or AO GHD.

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Saizen is indicated for:

- Children with GF due to GHD.
- Adults with either CO or AO GHD.

Serostim is indicated for treatment of:

• HIV patients with wasting or cachexia to increase lean body mass and body weight, and improve physical endurance.

Health Net

Zomacton is indicated for:

- Treatment of pediatric patients who have GF due to inadequate secretion of normal endogenous GH, SS associated with TS, ISS, SS or GF in SHOX deficiency, and SS born SGA with no catch-up growth by 2 years to 4 years.
- Replacement of endogenous GH in adults with GHD.

Zorbtive is indicate for treatment of:

SBS in adult patients receiving specialized nutritional support.

Policy/Criteria

Provider must submit documentation (such as office chart notes, lab results or other clinical information) supporting that member has met all approval criteria.

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It is the policy of health plans affiliated with Centene Corporation[®] that somatropin (recombinant human growth hormone (rhGH)) is **medically necessary** when the following criteria are met:

I. Initial Approval Criteria

A. Growth Hormone Deficiency with Neonatal Hypoglycemia (off-label) (must meet all):

- 1. Diagnosis of neonatal hypoglycemia due to GHD;
- 2. Prescribed by or in consultation with a pediatric endocrinologist;
- 3. Age ≤ 1 month;
- 4. Serum GH concentration $\leq 5 \mu g/L$;
- 5. Member meets (a or b):
 - a. Imaging shows hypothalamic-pituitary abnormality;



- b. Deficiency of ≥ 1 anterior pituitary hormone other than GH (e.g., ACTH, TSH, LH, FSH, prolactin);
- 6. The requested product is not prescribed concurrently with Increlex® (mecasermin);
- 7. If request is NOT for Norditropin or Humatrope: Norditropin and Humatrope product excipients are contraindicated or member has experienced clinically significant adverse effects to Norditropin and Humatrope;
- 8. Dose does not exceed 0.30 mg/kg per week.

Approval duration: 6 months or to member's renewal period whichever is longer

B. Growth Hormone Deficiency with Short Stature/Growth Failure - Children (open epiphyses) (must meet all):

- 1. Diagnosis of GHD;
- 2. Prescribed by or in consultation with a pediatric endocrinologist;
- 3. Age < 18 years;
- 4. If age > 10 years, open epiphysis on x-ray;
- 5. Member meets (a or b):
 - a. Low insulin-like growth factor (IGF)-I serum level;
 - b. Low insulin-like growth factor binding protein (IGFBP)-3 serum level;
- 6. Member meets (a, b, c, d, or e):
 - a. Two GH stimulation tests with peak serum levels \leq 10 μ g/mL (e.g., stimulants: arginine, clonidine, glucagon);
 - b. Deficiency of ≥ 3 pituitary hormones (i.e., ACTH, TSH, LH, FSH, prolactin);
 - c. Surgery or radiotherapy to the hypothalamic-pituitary region;
 - d. Imaging shows hypothalamic-pituitary abnormality;
 - e. GHD-specific mutation (e.g., POU1F1, PROP1, LHX3, LHX4, HESX1, OTX2, TBX19, SOX2, SOX3, GLI2, GHRHR, GH1);
- 7. Member meets (a or b):
 - a. SS: height < -2 SD below the mean for age and gender (SD and height within the last 90 days required);
 - b. GF: growth has slowed by more than 1 SD in \geq 6 months (SD and 2 heights \geq 6 months apart within the last year required);
- 8. The requested product is not prescribed concurrently with Increlex (mecasermin);
- 9. If request is NOT for Norditropin or Humatrope: Norditropin and Humatrope product excipients are contraindicated or member has experienced clinically significant adverse effects to Norditropin and Humatrope;
- 10. Dose does not exceed 0.30 mg/kg per week.

Approval duration: 6 months or to member's renewal period whichever is longer

C. Genetic Disorders with Short Stature/Growth Failure - Children (must meet all):

- 1. Diagnosis of PWS, TS, NS, or SHOX deficiency confirmed by a genetic test;
- 2. Prescribed by or in consultation with a pediatric endocrinologist;
- 3. Age < 18 years;
- 4. If age > 10 years, open epiphysis on x-ray;
- 5. Member meets (a or b):
 - a. SS: height < -2 SD (< -1.5 SD if TS) below the mean for age and gender (SD and height within the last 90 days required);
 - b. GF: growth has slowed by more than 1 SD in \geq 6 months (SD and 2 heights \geq 6 months apart within the last year required);
- 6. The requested product is not prescribed concurrently with Increlex (mecasermin);



- 7. If request is NOT for Norditropin or Humatrope: Norditropin and Humatrope product excipients are contraindicated or member has experienced clinically significant adverse effects to Norditropin and Humatrope;
- 8. Request meets one of the following (a, b, or c):
 - a. PWS: Dose does not exceed 0.24 mg/kg per week;
 - b. TS, NS: Dose does not exceed 0.5 mg/kg per week;
 - c. SHOX deficiency: Dose does not exceed 0.35 mg/kg per week.

Approval duration: 6 months or to member's renewal period whichever is longer

D. Chronic Kidney Disease with Growth Failure – Children (must meet all):

- 1. Diagnosis of CKD;
- 2. Prescribed by or in consultation with a pediatric endocrinologist or nephrologist;
- 3. Age < 18 years;
- 4. If age > 10 years, open epiphysis on x-ray;
- 5. Member meets (a, b, c, or d):
 - a. GFR < 60 mL/min per 1.73 m² for \geq 3 months;
 - b. Dialysis dependent;
 - c. Diagnosis of nephropathic cystinosis;
 - d. History of kidney transplant ≥ 1 year ago;
- 6. Member meets (a or b):
 - a. SS: height < -2 SD below the mean for age and gender (SD and height within the last 90 days required);
 - b. GF: growth has slowed by more than 1 SD in \geq 6 months (SD and 2 heights \geq 6 months apart within the last year required);
- 7. The requested product is not prescribed concurrently with Increlex (mecasermin);
- 8. If request is NOT for Norditropin or Humatrope: Norditropin and Humatrope product excipients are contraindicated or member has experienced clinically significant adverse effects to Norditropin and Humatrope;
- 9. Dose does not exceed 0.35 mg/kg per week.

Approval duration: 6 months or to member's renewal period whichever is longer

E. Growth Hormone Deficiency – Adults and Transition Patients (closed epiphyses) (must meet all):

- 1. Diagnosis of GHD;
- 2. Prescribed by or in consultation with an endocrinologist;
- 3. Age \geq 18 years OR closed epiphysis on x-ray;
- 4. Member has NOT received somatropin therapy for ≥ 1 month prior to GH/IGF-I testing as outlined below;
- 5. Member meets (a, b, or c):
 - a. Two fasting a.m. GH stimulation tests with peak serum levels $\leq 5 \,\mu g/mL$ (accepted stimulants: MacrilenTM [macimorelin] or combination of 2 stimulants such as arginine + glucagon);
 - b. Both of the following (i and ii):
 - i. One fasting a.m. GH stimulation test with peak serum level $\leq 5 \mu g/ml$ (accepted stimulants: Macrilen [macimorelin] or combination of 2 stimulants such as arginine + glucagon);
 - ii. One low IGF-I serum level;
 - c. One low IGF-I serum level and (i, ii, or iii):
 - i. Imaging shows hypothalamic-pituitary abnormality;
 - ii. Deficiency of \geq 3 pituitary hormones (i.e., ACTH, TSH, LH, FSH, prolactin);



- iii. GHD-specific mutation (e.g., POU1F1, PROP1, LHX3, LHX4, HESX1, OTX2, TBX19, SOX2, SOX3, GLI2, GHRHR, GH1);
- 6. The requested product is not prescribed concurrently with Increlex (mecasermin);
- 7. If request is NOT for Norditropin or Humatrope: Norditropin and Humatrope product excipients are contraindicated or member has experienced clinically significant adverse effects to Norditropin and Humatrope;
- 8. Dose does not exceed 0.4 mg/day (may adjust by up to 0.2 mg/day every 6 weeks to maintain normal IGF-1 serum levels; doses > 1.6 mg/day would be uncommon).

Approval duration: 6 months or to member's renewal period whichever is longer

F. Short Bowel Syndrome (must meet all):

- 1. Diagnosis of SBS;
- 2. Prescribed by or in consultation with a gastroenterologist;
- 3. Age \geq 18 years;
- 4. Patient is dependent upon and receiving intravenous nutrition;
- 5. If request is NOT for Norditropin or Humatrope: Norditropin and Humatrope product excipients are contraindicated or member has experienced clinically significant adverse effects to Norditropin and Humatrope;
- 6. Dose does not exceed 8 mg per day.

Approval duration: up to 4 weeks total

G. HIV-Associated Wasting or Cachexia (must meet all):

- 1. Diagnosis of HIV;
- 2. Prescribed by or in consultation with a physician specializing in HIV management;
- 3. Age \geq 18 years;
- 4. Unintentional weight loss of $\geq 10\%$ in the last 12 months occurring while on antiretroviral therapy;
- 5. Failure of at least 2 pharmacologic therapies from two separate drug classes (*Appendix B*) unless contraindicated or clinically adverse effects are experienced;
- 6. If request is NOT for Norditropin or Humatrope: Norditropin and Humatrope product excipients are contraindicated or member has experienced clinically significant adverse effects to Norditropin and Humatrope;
- 7. Dose does not exceed 6 mg per day.

Approval duration: 6 months or to member's renewal period whichever is longer (up to 12 months total)

H. Other diagnoses/indications

- 1. Refer to the off-label use policy for the relevant line of business if diagnosis is NOT specifically listed under section III (Diagnoses/Indications for which coverage is NOT authorized): CP.CPA.09 for commercial.
- 2. Small for gestational age (SGA) (NOT A COVERED BENEFIT)
- 3. Idiopathic Short Stature (ISS) (NOT A COVERED BENEFIT)

II. Continued Therapy

A. All Pediatric Indications (open epiphyses) (must meet all):

- 1. Currently receiving medication via Centene benefit or member has previously met initial approval criteria;
- 2. Age \leq 18 years OR open epiphysis on x-ray;



- 3. Member meets (a or b):
 - a. For diagnosis of neonatal hypoglycemia, when member has received somatropin therapy for ≥ 2 years, member's height has increased ≥ 2 cm in the last year as documented by 2 height measurements taken no more than 1 year apart (dates and height measurements required);
 - b. For all other pediatric diagnoses, member's height has increased ≥ 2 cm in the last year as documented by 2 height measurements taken no more than 1 year apart (dates and height measurements required);
- 4. If request is for a dose increase, request meets one of the following (a, b, c, or d):
 - a. GHD with or without neonatal hypoglycemia,
 - b. PWS: New dose does not exceed 0.24 mg/kg per week;
 - c. TS, NS: New dose does not exceed 0.5 mg/kg per week;
 - d. SHOX deficiency, CKD: New dose does not exceed 0.35 mg/kg per week;

Approval duration: 6 months or to member's renewal period whichever is longer

B. Growth Hormone Deficiency - Adults and Transition Patients (closed epiphyses) (must meet all):

- 1. Currently receiving medication via Centene benefit or member has previously met initial approval criteria;
- 2. For IGF-1 test results and dosing (test conducted within the last 90 days) (a, b, or c):
 - a. Low IGF-1 serum level: If request is for a dose increase, new dose does not exceed an incremental increase of more than 0.2 mg/day and a total dose of 1.6 mg/day;
 - b. Normal IGF-1 serum level: Requested dose is for the same or lower dose;
 - c. Elevated IGF-1 serum level: Requested dose has been titrated downward.

Approval duration: 6 months or to member's renewal period whichever is longer

C. Short Bowel Syndrome - Adults (must meet all):

- 1. Currently receiving medication via Centene benefit or member has previously met all initial approval criteria;
- 2. Member is responding positively to therapy;
- 3. Member has not received the requested product for ≥ 4 weeks;
- 4. If request is for a dose increase, new dose does not exceed 8 mg per day.

Approval duration: up to 4 weeks total

D. HIV-Associated Wasting/Cachexia - Adults (must meet all):

- 1. Currently receiving medication via Centene benefit or member has previously met all initial approval criteria;
- 2. Member is responding positively to therapy;
- 3. Member has not received ≥ 12 months of therapy;
- 4. If request is for a dose increase, new dose does not exceed 6 mg per day.

Approval duration: 6 months or to member's renewal period whichever is longer (up to 12 months total)

E. Other diagnoses/indications (must meet 1 or 2):

1. Currently receiving medication via health plan benefit and documentation supports positive response to therapy.

Approval duration: Duration of request or 12 months (whichever is less); or

2. Refer to the off-label use policy for the relevant line of business if diagnosis is NOT specifically listed under section III (Diagnoses/Indications for which coverage is NOT authorized): CP.CPA.09 for commercial.



II. Diagnoses/Indications for which coverage is NOT authorized:

- A. Non-FDA approved indications, which are not addressed in this policy, unless there is sufficient documentation of efficacy and safety according to the off label use policy – CP.CPA.09 or evidence of coverage documents.
- B. Small for gestational age (SGA) (NOT A COVERED BENEFIT)
- C. Idiopathic Short Stature (ISS) (NOT A COVERED BENEFIT)

III. Appendices/General Information

Appendix A: Abbreviation CKD: chronic kidney disease

FDA: Food and Drug Administration

GFR: glomerular filtration rate

GH: growth hormone

GHD: growth hormone deficiency HIV: human immunodeficiency virus IGF-1: insulin-like growth factor-1

IGFBP-3: insulin-like growth factor binding protein-3

ISS: idiopathic short stature NS: Noonan syndrome PWS: Prader-Willi syndrome

rhGH: recombinant human growth hormone

SBS: short bowel syndrome SD: standard deviation

SGA: small for gestational age

SHOX: short stature homeobox-containing gene

TS: Turner syndrome

Appendix B: Therapuetic Alternatives

This table provides a listing of preferred alternative therapy recommended in the approval criteria. The drugs listed here may not be a formulary agent for all relevant lines of business and may require prior authorization.

| Drug | Dosing Regimen | Dose Limit/Maximum Dose | | | | |
|--|--|---|--|--|--|--|
| Appetite stimulants | | | | | | |
| Megestrol (Megace®) | 400 - 800 mg PO daily (10 – 20 ml/day) | 800 mg/day | | | | |
| Dronabinol (Marinol®) | 2.5 mg PO bid | 20 mg/day | | | | |
| Testosterone replacement prod | lucts | | | | | |
| Testosterone enanthate or cypionate (Various brands) | 50 - 400 mg IM Q2 – 4 wks | 400 mg Q 2 wks | | | | |
| Androderm® (testosterone transdermal) | 2.5 – 7.5 mg patch applied topically QD | 7.5 mg/day | | | | |
| Androgel® (testosterone gel) | 5 - 10 gm gel (delivers 50 – 100 mg testosterone) applied topically QD | 10 gm/day gel (100 mg/day testosterone) | | | | |
| Testim® (testosterone gel) | 5 - 10 gm gel (delivers 50 – 100 mg testosterone) applied topically QD | 10 gm/day gel (100 mg/day testosterone) | | | | |
| Anabolic steroid | | | | | | |
| Oxandrolone (Oxandrin®) | 2.5 – 20 mg PO /day | 20 mg/day | | | | |

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| Drug | Dosing Regimen | Dose Limit/Maximum Dose | | | |
|-----------------------------|--------------------------------|-------------------------|--|--|--|
| Nandrolone decanoate | 100 mg IM Q week | 100 mg Q wk | | | |
| Nausea/vomiting treatments* | | | | | |
| chlorpormazine | 10 to 25 mg PO q4 to 6 hours | 2,000 mg/day | | | |
| | prn | | | | |
| perphenazine | 8 to 16 mg/day PO in divided | 64 mg/day | | | |
| | doses | | | | |
| prochlorperazine | 5 to 10 mg PO TID or QID | 40 mg/day | | | |
| promethazine | 12.5 to 25 mg PO q4 to 6 hours | 50 mg/dose; 100 mg/day | | | |
| | prn | | | | |
| trimethobenzamide | 300 mg PO TID or QID prn | 1,200 mg/day | | | |

Therapeutic alternatives are listed as Brand name® (generic) when the drug is available by brand name only and generic (Brand name®) when the drug is available by both brand and generic.

Appendix C: Contraindications/Boxed Warnings

•Contraindication(s):

Acute critical illness

Children with PWS who are severely obese or have severe respiratory impairment (reports of sudden death)

Active malignancy

Product hypersensitivity

Active proliferative or severe non-proliferative diabetic retinopathy

Children with closed epiphyses

• Boxed warning(s): none reported

Appendix D: General Information

- Preferred products: Humatrope and Norditropin
- Non-preferred products: Genotropin, Nutropin AQ, Omnitrope, Saizen, Zomacton,
 Zorbtive
- In childhood cancer survivors who were treated with radiation to the brain/head for their
 first neoplasm and who developed subsequent GHD and were treated with somatropin, an
 increased risk of a second neoplasm has been reported. Intracranial tumors, in particular
 meningiomas, were the most common of these second neoplasms. In adults, it is
 unknown whether there is any relationship between somatropin replacement therapy and
 CNS tumor recurrence.
- Short stature/growth failure prior to rhGH therapy is evidenced by one of the following:
 - Height > 3 SD below the mean
 - \circ Height > 2 SD below the mean and (a or b)
 - a) Height velocity > 1 SD below the mean for chronological age over 1 year
 - b) Decrease in height SD > 0.5 over 1 year in children > 2 years of age
 - o Height > 1.5 SD below midparental height
 - a) Boys: (father's height + mother's height + 13 cm)/2 or (Father's Height + Mother's Height + 5 inches)/2
 - b) Girls: (father's height + mother's height 13 cm)/2 or Father's Height 5 inches + Mother's Height) / 2
 - Height velocity > 2 SD below the mean over 1 year
 - o Height velocity > 1.5 SD below the mean over 2 years
- The 2009 American Association of Clinical Endocrinologists (AACE) guidelines for clinical practice for growth hormone use in growth hormone-deficient adults and transition

^{*}preferred status may differ based on specific formulary used



patients state that "there is no evidence that one GH product is more advantageous over the other, apart from differences in pen devices, dose increments and decrements, and whether or not the product requires refrigeration; therefore, we do not recommend the use of one commercial GH preparation over another."

- Examples of positive response to therapy for cachexia in HIV patients include a 2% increase in body weight and/or body cell mass (BCM). Once BCM is normalized, therapy may be stopped and the patient may be monitored for wasting to reoccur.
 - o Body cell mass (BCM): The total mass of all the cellular elements in the body which constitute all the metabolically active tissue of the body. The preferred method for assessing BCM depletion is bioelectrical impedance analysis (BIA) which can be performed with portable equipment in the office setting.
- Preferred agents for nausea/vomiting include ondansetron, hydroxyzine, promethazine, prochlorperazine, meclizine, trimethobenzamide, or dimenhydranate.

IV. Dosage and Administration

| Drug Name | Indication | Dosing Regimen | Maximum Dose | | | |
|---|------------|---------------------------------------|---------------------|--|--|--|
| Pediatric Indications (Subcutaneous administration; weekly doses should be divided) | | | | | | |
| Genotropin, Humatrope, | GHD | G, O: 0.16 to 0.24 mg/kg/week | See dosing regimens | | | |
| Norditropin, Nutropin, | | H, Z: 0.18 to 0.30 mg/kg/week | | | | |
| Omnitrope, Saizen, | | N: 0.17 to 0.24 mg/kg/week | | | | |
| Zomacton | | Nu: to 0.30 mg/kg/week | | | | |
| | | S: 0.18 mg/kg/week | | | | |
| Genotropin, Norditropin, | PWS | G, N, O: 0.24 mg/kg/week | 0.24 mg/kg/week | | | |
| Omnitrope | | | | | | |
| Genotropin, Humatrope, | SGA | G, O: to 0.48 mg/kg/week | 0.48 mg/kg/week | | | |
| Norditropin, Omnitrope, | | H, N, Z: to 0.47 mg/kg/week | | | | |
| Zomacton | | | | | | |
| Genotropin, Humatrope, | TS | G, O: 0.33 mg/kg/week | See dosing regimens | | | |
| Norditropin, Nutropin, | | H, Nu, Z: to 0.375 mg/kg/week | | | | |
| Omnitrope, Zomacton | | N: to 0.47 mg/kg/week | | | | |
| Genotropin, Humatrope, | ISS | G, O, No: to 0.47 mg/kg/week | See dosing regimens | | | |
| Norditropin, Nutropin, | | H, Z: to 0.37 mg/kg/week | | | | |
| Omnitrope, Zomacton | | Nu: to 0.30 mg/kg/week | | | | |
| Humatrope, Zomacton | SHOX | H, Z: 0.35 mg/kg/week | 0.35 mg/kg/week | | | |
| Norditropin | NS | 0.46 mg/kg/week | 0.46 mg/kg/week | | | |
| Nutropin | CKD | 0.35 mg/kg/week | 0.35 mg/kg/week | | | |
| Adult Indications (Subcuta | | | | | | |
| Genotropin, Humatrope, | GHD | 0.4 mg/day - may adjust by | See dosing regimen | | | |
| Norditropin, Nutropin, | | increments up to 0.2 mg/day every 6 | | | | |
| Omnitrope, Saizen, | | weeks to maintain normal IGF-1 | | | | |
| Zomacton | | serum levels.* | | | | |
| | | *Dosing regimen from Endocrine | | | | |
| | | Society guidelines (Fleseriu, et al., | | | | |
| | | 2016). | | | | |
| | | | | | | |
| | | Adult GHD dosing should be | | | | |
| | | substantially lower than that | | | | |
| | | prescribed for children. Adult doses | | | | |
| | | beyond 1.6 mg/day would be | | | | |
| | | uncommon. | | | | |
| Serostim | HIV- | 0.1 mg/kg QOD or QD to 6 mg QD | 6 mg/day up to 24 | | | |
| | associated | | weeks | | | |
| | wasting | | | | | |
| Zorbtive | SBS | 0.1 mg/kg QD to 8 mg QD | 8 mg/day up to 4 | | | |
| | | | weeks | | | |



V. Product Availability

| Drug | Availability | |
|-------------------------------|--|--|
| Genotropin lyophilized powder | Dual-chamber syringe: 5 mg, 12 mg | |
| Genotropin Miniquick (without | Cartridge: 0.2 mg, 0.4 mg, 0.6 mg, 0.8 mg, 1.0 mg, 1.2 mg, 1.4 | |
| preservative) | mg, 1.6 mg. 1.8 mg, and 2.0 mg | |
| Humatrope | Pen Cartridge: 6 mg, 12 mg, 24 mg | |
| | Vial: 5mg | |
| Norditropin Flexpro | Pen: 5 mg/1.5 mL, 10 mg/1.5 mL, 15 mg/1.5 mL, 30 mg/3 mL | |
| Nutropin AQ NuSpin | Cartridge: 5 mg/2 mL | |
| | Pen: 10 mg/2 mL, 20 mg/2 mL | |
| Omnitrope | Cartridge: 5 mg/1.5 mL, 10 mg/1.5 mL | |
| | Dual-chamber syringe: 5.8 mg | |
| Saizen | Cartridge: 8.8 mg | |
| | Vial: 5 mg, 8.8 mg | |
| Serostim | Vial: 4 mg, 5 mg, 6 mg | |
| Zomacton | Vial: 5 mg, 10 mg | |
| Zorbtive | Vial: 8.8 mg | |

VII. References

FDA Labels

- 1. Genotropin Prescribing Information. NY, NY: Pfizer, Inc.; April 2019. Available at www.genotropin.com. Accessed October 29, 2019.
- 2. Humatrope Prescribing Information. Indianapolis, IN: Eli Lilly; December 2016. Available at: www.humatrope.com. Accessed October 29, 2019.
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| Reviews, Revisions, and Approvals | Date | P&T Approval Date |
|--|----------|----------------------|
| Converted to new template; minor changes to verbiage and grammar. References updated. | 03.16.17 | 11.17 |
| 2Q 2018 annual review: Added specialist requirement; aAdded requirement for baseline height documentation for initial approval of GH use in children in order to assess response at reauthorization; continued approval criteria for GH use in children was revised from: Continued growth rate exceeds 2.5 cm/year to 2 cm/year per NICE 2010 guidelines and 2008 Pediatric Endocrine Society; added bone age requirement for continued tx in children; combined CP.CPA.151 Somatropin (Serostim) into this grouped somatropin policy; added preferencing to dx of HIV-associated cachexia; references and appendices reviewed and updated. | 02.20.18 | 04.18 |
| Added HIV related wasting and cachexia under Section I. initial approval criteria and section II. continued approval criteria. | 03.27.18 | 04.18 |
| 2Q 2019 annual review: added age requirement for wasting or cachexia in HIV patients; added new FDA indications for Zomacton, references reviewed and updated. | 03.19.19 | 04.19 |



| 1Q20 annual review: edited whole document to more | 12.20.19 | |
|---|----------|------------|
| | 12.20.17 | |
| closely resemble corporate criteria but without plan | | |
| excluded diagnoses (ISS and SGA); updated description | | |
| to include table of medications and indications; | | |
| updated FDA approved indications section to match | | |
| corporate criteria; added index: in initial approval | | |
| cirtieria section separated pediatric diagnoses from | | |
| one section into four separate sections and separated | | |
| adult diagnoses from one section to three separate | | |
| sections; separated continued therapy from three | | |
| sections to five sections to more closely match | | |
| corporate; reviewed and updated appendices; updated | | |
| · | | |
| , | | |
| and updated, updated important renimber. | | |
| Approved by P&T | | 01.10.2020 |
| sections to five sections to more closely match corporate; reviewed and updated appendices; updated dosage and administration table; references reviewed and updated; updated important reminder. | | 01.10.2020 |

Important Reminder

This clinical policy has been developed by appropriately experienced and licensed health care professionals based on a review and consideration of currently available generally accepted standards of medical practice; peer-reviewed medical literature; government agency/program approval status; evidence-based guidelines and positions of leading national health professional organizations; views of physicians practicing in relevant clinical areas affected by this clinical policy; and other available clinical information. The Health Plan makes no representations and accepts no liability with respect to the content of any external information used or relied upon in developing this clinical policy. This clinical policy is consistent with standards of medical practice current at the time that this clinical policy was approved. "Health Plan" means a health plan that has adopted this clinical policy and that is operated or administered, in whole or in part, by Centene Management Company, LLC, or any of such health plan's affiliates, as applicable.

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This clinical policy does not constitute medical advice, medical treatment or medical care. It is not intended to dictate to providers how to practice medicine. Providers are expected to exercise professional medical judgment in providing the most appropriate care, and are solely responsible for the medical advice and treatment of members. This clinical policy is not intended to recommend treatment for members. Members should consult with their treating physician in connection with diagnosis and treatment decisions.



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