

### Policy Type: PA      Pharmacy Coverage Policy: EOCCO109

#### Description

Oxymetholone (Anadrol-50) enhances production of erythropoietin in patients with anemias due to bone marrow failure. It stimulates erythropoiesis in anemias due to deficient red cell production. Oxandrolone is a synthetic testosterone derivative with similar androgenic and anabolic actions.

#### Length of Authorization

- **Oxymetholone (Anadrol-50)**
  - i. Anemias
    1. Initial: Six months
    2. Renewal: 12 months
  - ii. Cachexia associated with AIDS:
    1. Initial: Three months
    2. Renewal: Three months
  
- **Generic oxandrolone**
  - i. Initial: Three months
  - ii. Renewal: Not eligible. If additional treatment courses are requested, please see initial criteria.

#### Quantity Limits

Product Name	Dosage Form	Indication	Quantity Limit
oxymetholone (Anadrol-50)	50 mg tablets	Anemias caused by deficient red cell production; Cachexia associated with AIDS	Anemias: 1 to 5 mg/kg/day Cachexia: 90 tablets/30 days
oxandrolone	2.5 mg tablets	Weight gain associated with surgery, infections, trauma; Catabolism with prolonged corticosteroid use; Bone pain associated with osteoporosis; Cachexia associated with AIDS	Adults: 60 tablets/30 days  Pediatrics: ≤0.1 mg/kg/day
	10 mg tablets		

#### Initial Evaluation

- I. **Oxymetholone (Anadrol-50)** may be considered medically necessary when the following criteria below are met:
  - A. Member has a diagnosis of **anemia caused by deficient red cell production** associated with one of the following conditions:
    1. Acquired aplastic anemia; **OR**
    2. Congenital aplastic anemia; **OR**

3. Fanconi's anemia; **OR**
  4. Hypoplastic anemias caused by the administration of myelotoxic drugs, or myelosuppression due to chemotherapy; **OR**
  5. Myelofibrosis; **OR**
- B. Member has a diagnosis of **cachexia associated with AIDS; AND**
1. Medication is prescribed by, or in consultation with, a specialist in gastroenterology, nutritional support, or infectious disease; **AND**
    - i. Member has  $\geq 10\%$  unintentional weight loss over a 12 month period; **OR**
    - ii. Member has  $\geq 7.5\%$  unintentional weight loss over a 6 month period; **OR**
    - iii. Member has  $\geq 5\%$  body cell mass (BCM) loss within 6 months; **OR**
    - iv. For males, BCM  $< 35\%$  and body mass index (BMI)  $< 27 \text{ kg/m}^2$ ; **OR**
    - v. For females, BCM  $< 23\%$  and BMI  $< 27 \text{ kg/m}^2$ ; **OR**
    - vi. BMI  $< 18 \text{ kg/m}^2$ ; **AND**
    - vii. Weight loss is not attributable to other causes
- II. **Generic oxandrolone** may be considered medically necessary when the following criteria below are met:
- A. Medication will be used as adjunctive therapy to promote weight gain; **AND**
    1. Weight loss is due to one of the following conditions:
      - i. Extensive surgery; **OR**
      - ii. Chronic infections; **OR**
      - iii. Severe trauma; **OR**
      - iv. Member fails to gain or maintain normal weight without definite pathophysiological reasons; **OR**
  - B. Medication will be used to offset the protein catabolism associated with prolonged administration of corticosteroids; **OR**
  - C. Medication will be used for the treatment of bone pain associated with osteoporosis; **OR**
  - D. Member has a diagnosis of **cachexia associated with AIDS; AND**
    1. Medication is prescribed by, or in consultation with, a specialist in gastroenterology, nutritional support, or infectious disease; **AND**
      - i. Member has  $\geq 10\%$  unintentional weight loss over a 12 month period; **OR**
      - ii. Member has  $\geq 7.5\%$  unintentional weight loss over a 6 month period; **OR**
      - iii. Member has  $\geq 5\%$  body cell mass (BCM) loss within 6 months; **OR**
      - iv. For males, BCM  $< 35\%$  and body mass index (BMI)  $< 27 \text{ kg/m}^2$ ; **OR**
      - v. For females, BCM  $< 23\%$  and BMI  $< 27 \text{ kg/m}^2$ ; **OR**
      - vi. BMI  $< 18 \text{ kg/m}^2$ ; **AND**
      - vii. Weight loss is not attributable to other causes; **OR**
  - E. Member has a diagnosis of Turner Syndrome
- III. Oxymetholone (Anadrol-50) and oxandrolone are considered investigational when used for all other conditions.

## Renewal Evaluation

- I. **Oxymetholone (Anadrol-50)**
  - A. Member has received a previous prior authorization approval for this agent through this health plan; **AND**
  - B. Member is not continuing therapy based off being established on therapy through samples, manufacturer coupons, or otherwise. Initial policy criteria must be met for the member to qualify for renewal evaluation through this health plan; **AND**
  - C. Member has exhibited improvement or stability of disease symptoms (e.g. weight gain, reduction in pain, resolution of symptoms)
- II. **Oxandrolone:** If an additional treatment course is requested, please see initial criteria.

## Supporting Evidence

- I. Oxymetholone (Anadrol-50) is FDA-approved for the treatment of anemias caused by deficient red blood cells. Common conditions associated with this include acquired and congenital aplastic anemia, myelofibrosis, and hypoplastic anemias due to the administration of myelotoxic drugs. Other supportive measures for these anemias include transfusion, correction of iron, folic acid, vitamin B12 or pyridoxine deficiency, antibacterial therapy, and the appropriate use of corticosteroids.
  - Oxymetholone (Anadrol-50) is the most commonly used androgen in Fanconi's anemia, but danazol and oxandrolone have also been used. The efficacy of androgens in Fanconi's anemia was evaluated in a retrospective series that included 37 patients with available medication records. Of these patients, 68% had an improvement in hemoglobin level, and 32% showed improvements in hemoglobin, white blood cell count, and platelet count. In most cases, the responses were sufficient enough to convert the patient from transfusion-dependent to transfusion-independent. The median time to response was 12 to 14 weeks.
  - Although FDA-approved for myelofibrosis-associated anemia, oxymetholone (Anadrol-50) is not routinely recommended for use. Danazol, another oral anabolic steroid, is considered an NCCN Category 2A option in patients with anemia associated with myelofibrosis when serum EPO remains above 500 mU/mL despite treating coexisting causes. Other options include lenalidomide (Revlimid) and thalidomide.
- II. For treatment of anemias caused by deficient red blood cells, if there is no response seen after three to six months, therapy should be discontinued. If blood counts stabilize or improve, the daily dose may be tapered to the minimum effective dose to avoid non-hematologic toxicity.
- III. Oxandrolone is FDA-approved as adjunctive therapy to promote weight gain after weight loss following extensive surgery, chronic infections, or severe trauma, and in some patients who without definite pathophysiological reasons, fail to gain or maintain normal weight. It is also indicated to offset the protein catabolism associated with prolonged administration of corticosteroids, and for the relief of bone pain that may accompany osteoporosis.
  - Current osteoporosis guidelines do not make recommendations regarding use of oxandrolone for osteoporosis related pain.

- IV. A two to four week course of oxandrolone is usually adequate depending on clinical response and tolerance. Therapy should be intermittent (vs chronic).
- V. Testosterone and its derivatives, such as oxandrolone, have been studied in patients with HIV/AIDS. A 2004 review concluded that improvements in body composition and muscle strength were significant with oxandrolone in the majority of well-designed trials, although long-term safety and optimal dose were yet to be determined. Historically, weight loss and tissue wasting were common in HIV/AIDS; however, the incidence of wasting has declined since the introduction of effective antiretroviral treatment.
- VI. Anabolic steroids, such as oxandrolone may be used as an adjunct to growth hormone (GH) in patients with Turner Syndrome. It is well established that GH therapy is effective in increasing final adult height. For those less than nine years of age, growth-promoting therapy is generally initiated with GH alone. However, in older patients, or those with extreme short stature, consideration can be given to adding an agent such as oxandrolone.
  - Therapy should be continued until a satisfactory height has been attained or until little growth potential remains (e.g. bone age  $\geq$  14 years and growth velocity  $<$  2 cm/year)
- VII. Androgen therapy can be associated with a number of side effects, including virilization, growth abnormalities, behavioral changes, and hypertension. Serious side effects involve the liver, and include transaminitis, cholestasis, peliosis hepatitis, and liver tumors. Given these concerning risks, patients receiving androgen therapy should have liver chemistry profiles monitored every one to two months, and liver ultrasounds performed every six to 12 months.

#### Investigational or Not Medically Necessary Uses

- IV. Due to a lack of high-quality, prospective clinical trials, oxymetholone (Anadrol-50) and oxandrolone are considered investigational for all other conditions.

#### References

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2. Anadrol-50 prescribing information. Unimed Pharma, Inc. October 2012
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5. Orr R, Singh F. The anabolic androgenic steroid oxandrolone in the treatment of wasting and catabolic disorders: review of efficacy and safety. *Drugs* 2004; 64(7):725-50
6. Myeloproliferative Neoplasms. NCCN Clinical Practice Guidelines in Oncology. Version 3.2019 – September 4, 2019
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9. Bondy CA, for the Turner Syndrome Consensus Study Group. Care of girls and women with Turner syndrome: a guideline of the Turner Syndrome Study Group. *J Clin Endocrinol Metab* 2007;92:10-25

**Policy Implementation/Update:**

Date Created	December 2019
Date Effective	December 2019
Last Updated	
Last Reviewed	

Action and Summary of Changes	Date
New policy created	12/2019