**Referral Algorithm: Precocious Puberty (Breast Development/Testicular Enlargement)**

**Premature thelarche**

- **Girls:** Under 8 yr of age AND breast development Tanner stage ≥2
- **Boys:** Under 9 yr of age AND testicular enlargement ≥4 cc or >2 cm length (Tanner stage ≥2)

- **Headaches and/or visual changes**
  - Yes: **Refer to Endocrine - Urgent appointment (PCP to complete bone age X-ray prior to the appointment in Endocrine)**
  - No:
    - **Bone age X-ray result**
      - **Bone age advanced** (Bone age > Chronological age by 2 years): **Refer to Endocrine**
      - **Bone age = Chronological age** (within 2 years of chronological age):
        - **Growth velocity is >8 cm/yr** or abnormal labs**?
          - Yes: **Follow up with PCP in 4 months for height recheck or check labs**
          - No: **Follow up with PCP in 4 months for height recheck or check labs**

**Not precocious puberty - No referral to Endocrine needed**

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**AM Labs (8 to 9 a.m.):**
- Ultrasensitive pediatric LH
- FSH (pediatric)
- Estradiol (pediatric) or Total testosterone by LC/MS
- TSH, free T4

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* Growth velocity can be calculated based on 4 or 6 months of linear growth.
- Centimeters growth in 4 months x 3 = expected growth velocity in a year
- Centimeters growth in 6 months x 2 = expected growth velocity in a year
Referral Algorithm: Precocious Puberty (Hair Development)

**Premature pubarche/adrenarche**

**Girls:** Under 8 yr of age or **Boys:** Under 9 yr of age with pubic hair (Tanner stage ≥2)

- Bone age X-ray result
  - Bone age advanced (Bone age > Chronological age by 2 years)
    - Refer to Endocrine
  - Bone Age = Chronological age (within 2 years of chronological age)

- Axillary hair
  - OR
  - Clitoral or penile enlargement
  - Accelerated height velocity (>8 cm/yr) *
  - OR
  - Abnormal labs **

**Follow up with PCP in 4 months for height recheck or check labs**

**Not precocious puberty - No referral to Endocrine needed**

* Growth velocity can be calculated based on 4 or 6 months of linear growth.
  - Centimeters growth in 4 months x 3 = expected growth velocity in a year
  - Centimeters growth in 6 months x 2 = expected growth velocity in a year

**AM Labs (8 to 9 a.m.):**
- 17-hydroxyprogesterone (17 OHP)
- Total testosterone by LC/MS
- DHEA-S

**Endocrine Referral Algorithm: Precocious Puberty (Hair Development)**

*Created 6/2020*
Referral Algorithm: Precocious Puberty (Vaginal Bleeding/Spotting)

*Premature menarche*

<10 years of age

- Refer to Endocrinology
  
  *(PCP to complete bone age prior to appointment)*

- No

  Not precocious puberty - Consider referring to Gynecology