

CT Children's CLASP Guideline

Infantile Hemangioma

INTRODUCTION

Hemangiomas are the most common tumor of infancy, generally thought to occur in up to 3% of infants. While often uncomplicated, some hemangiomas may have significant sequelae including impairment of vital function, ulceration, bleeding, and adverse cosmetic outcomes. Therefore, identification of high risk infantile hemangiomas by primary care physicians is extremely important, and early referral is the key to positive outcomes. This CLASP tool aims to help primary care providers identify which hemangiomas are high risk and would benefit from early evaluation and treatment by Connecticut Children's Center for Cancer and Blood disorders.

Although there are many cutaneous vascular lesions, infantile hemangiomas (IH) have a characteristic natural history that helps us differentiate them from other vascular tumors and malformations. IH are not fully formed at birth. They are often not noticed on day of life zero, but appear within the first few days to weeks of life. Initially, IH typically appear as flat, pink to red areas of skin and may be mistaken by parents for a scratch on the skin. Once present, IH are characterized by two life phases:

- 1) Rapid growth phase: This occurs very early, **typically between 4-10 weeks of age**. Referral before rapid growth progresses is critical for high risk lesions. Hemangiomas will continue to grow after this time frame, but less rapidly, for approximately the first year of life.
- 2) Involution phase: This is a gradual regression phase over several years. The erythema will fade but, depending on the size and location of the lesion, the skin may never appear completely "normal".

Early referral of high risk lesions, before rapid growth has occurred, can limit adverse outcomes. The American Board of Pediatrics considers treatment of hemangiomas and vascular anomalies to be within the expertise of Pediatric Hematology and Oncology. At Connecticut Children's, our clinicians within the Center for Cancer and Blood Disorders have received special training in the management of hemangiomas and are able to evaluate and treat patients within a 2 week timeframe. Any urgent cases will be seen within days of referral. Complicated cases will be seen in collaboration with the Vascular Anomalies Team, including clinicians from Cardiology, Interventional Radiology, and Surgery.

INITIAL EVALUATION AND MANAGEMENT

TARGETED HISTORY & PHYSICAL EXAM:

History:

- Natural history of lesion
 - When was it first identified by family
 - What did it look like when it first appeared
 - How has it changed since first noted
- Any history of ulceration or bleeding
- Family history of any family members with history of hemangioma or vascular tumors/malformations

Physical Exam:

- Number of lesions, location, type (capillary/superficial vs deep/subcutaneous vs mixed)
- Evidence of ulceration or bleeding from the area, depth, compressibility
- Photos are very helpful for tracking growth/change
- Identify high risk lesions:

TABLE 1

High-Risk Features of Infantile Hemangiomas

Feature	Risk
Location	
Axillae	Ulceration
Beard area	Obstructive airway hemangiomas, scarring, structural abnormalities
Breast (female)	Developmental anomaly in breast or nipple
Diaper area (perineal or perianal)	Ulceration
Ear helix	Disfigurement
Eyes	Vision changes, disfigurement
Lips	Ulceration, disfigurement, feeding impairment
Neck	Ulceration
Nose	Disfigurement
Larger hemangioma by location	
Any location > 5 cm	Scarring and disfigurement
Face or scalp (> 2 cm)	Scarring and disfigurement, structural abnormalities if > 5 cm
Lumbosacral or perineal (> 5 cm)	Structural abnormalities
Neck, trunk, or extremity (> 2 cm or > 2 mm thick)	Scarring and disfigurement
5 or more hemangiomas	Hepatic hemangiomas, severe congestive heart failure, severe hyperthyroidism

(Krowchuk, 2021)

INITIAL MANAGEMENT:

- Infantile hemangiomas may be managed in the primary care setting so long as they meet the following criteria:
 - Not a high risk lesion as outlined in table
 - No history of bleeding or ulceration
 - Parents comfortable with observation
- If diagnosis is unclear (e.g., possible capillary malformation such as nevus simplex or port wine stain vs. infantile hemangioma), lesion should be followed closely to assess (q2 weeks) for rapid growth phase.
- Ask family to photo document the lesion over time.
- Refer any high risk lesions as soon as identified. Watchful waiting is not recommended for high-risk lesions. The AAP policy statement recommends referral of high-risk lesions to a hemangioma specialist as soon as possible.

WHEN TO REFER	<p>* High risk lesions should be referred upon clinical recognition by the primary care provider, typically within the first month of life.</p> <p>URGENT REFERRAL: Should be seen <i>within 3 days</i> if the lesion:</p> <ul style="list-style-type: none"> ▪ Is bleeding/ulcerating ▪ Is impacting the baby's ability to feed ▪ Is impacting vision, or with any concern for pressure on the eye ▪ Any concern for airway involvement ▪ Large segmental lesions, large lumbar lesions crossing midline, beard distribution <p>ROUTINE REFERRAL: If the lesion(s) does not meet criteria above for urgent referral, we will typically see the infant <i>within 2 weeks</i>.</p> <p>When the patient is evaluated by Hematology/Oncology, a decision will be made regarding the need for additional specialty evaluations (Cardiology, Surgery, Interventional Radiology, Dermatology).</p>
HOW TO REFER	<p>Referral to Center for Cancer and Blood Disorders via CT Children's One Call Access Center Make a Referral - Connecticut Children's (connecticutchildrens.org) Phone: 833.733.7669 Fax: 833.226.2329</p> <p>Appointments available in Hartford, Farmington, Danbury, and Westport</p> <p>Information to be included with the referral:</p> <ul style="list-style-type: none"> ▪ Description of the concerning lesion, baby's gestation age at birth ▪ Picture of lesion if possible
WHAT TO EXPECT	<p>What to expect from CT Children's Visit:</p> <ul style="list-style-type: none"> ▪ During initial visit we will evaluate the lesion to ensure agreement of the likely diagnosis of infantile hemangioma ▪ If we recommend systemic therapy with a beta-blocker (atenolol or propranolol), we will first do a screening EKG for safety of initiating beta-blocker therapy ▪ Treatment: <ul style="list-style-type: none"> ○ At times, when urgent, we may start therapy the same day as the initial consult. More likely, we will bring the patient back at their convenience during the following week to start a beta-blocker therapy. ○ Patients <8 weeks of age (corrected for prematurity) initiate the medication on our inpatient service (one night stay). ○ If >8 weeks of age, we start the medication as an outpatient over a 5-6 hour clinic visit. ○ We may decide to use topical therapy, timolol, if there are smaller and superficial lesions. ▪ Follow up: <ul style="list-style-type: none"> ○ If we do start oral beta blocker therapy, we escalate to full dose over one week and plan for a one week follow up visit. Subsequently, we see patients monthly for the first several months of therapy, and then space to every 2-3 months until 1 year of age. ○ At around one year of age, we typically discuss stopping the medication with a short medication wean. ▪ At each visit, the hemangiomas will be examined and documented in the visit note, including photo documentation.