

## Infantile Hemangioma Initial Clinical Assessment for Patients $\leq$ 3mos of Age

- This tool is intended to be used prospectively to facilitate a standardized initial assessment of individual patients with suspected infantile hemangioma (IH) consistent with the American Academy of Pediatrics' (AAP) [Clinical Practice Guideline \(CPG\) for the Management of Infantile Hemangiomas](#).
  - While this tool may be used to guide assessment for patients of any age, patients  $\leq$ 3 months of age are emphasized because this is the period of rapid growth for IH. Early, accurate assessment is critical to successful intervention for high-risk IH during this time period.
  - Associated AAP IH CPG tool: [Supplemental Figure 11](#) "Action Needed for an Infant  $\leq$ 3 Months of Age Being Seen With an IH"
- Standardized assessment has two primary goals:
  - Clinicians will accurately and consistently risk stratify IH.
  - Clinicians will adopt consistent nomenclature for describing and assigning risk level for IH.
- This tool is designed to be integrated in to a paper documentation work flow, or to be digitally adapted into an electronic record or clinical registry.
- This tool may be used to support retrospective data collection if providers utilize systematic quality improvement (QI) with measurement as an implementation strategy for the AAP IH CPG. The AAP IH CPG "[IH QI Data Collection Tool](#)" is mapped to the questions in this document, as well as to the initial [QI metrics](#) published with the CPG.

### 1. Demographics

- a. **Date of visit:** \_\_\_\_\_
- b. **Patient name:** \_\_\_\_\_
- c. **Patient DOB:** \_\_\_\_\_
- d. **Patient age at visit:** \_\_\_\_\_

### 2. Assessment

#### a. **Confirm diagnosis of IH:**

- i. *Infantile hemangiomas are benign vascular tumors of infancy and childhood with unique clinical and histopathologic characteristics that distinguish them from other vascular tumors (e.g., congenital hemangiomas) or malformations. These include development during the first weeks or months of life, a typical natural history of rapid growth followed by gradual involution, and immunohistochemical staining of biopsy specimens with erythrocyte-type glucose transporter protein (GLUT-1) and other unique markers not present on other benign vascular tumors. Many other entities are also called "hemangiomas." Some are true vascular tumors, and others are vascular malformations. Therefore, it is important to use the adjective "infantile" when referring to true IHs.*

- ii. **Patient has IH?**       **YES (Proceed)**       **NO (Stop)**

**b. Utilize a standardized assessment and nomenclature to describe IH type:**

i. Associated tool: IH CPG [Supplemental Figures 5-10 \(IH Types\)](#)

ii. Describe IH depth:

- Superficial** (bright red with little or no subcutaneous component)
- Deep** (blue and located below the skin surface)
- Combined** (both superficial and deep components are present)

iii. Describe IH pattern of anatomic involvement:

- Localized** (well-defined, focal lesions; appearing to arise from a central point)
- Segmental** (involving an anatomic region, often plaque-like, and often measuring >5 cm in diameter)
- Indeterminate / undetermined** (neither clearly localized or segmental; often called partial segmental)
- Multifocal** (multiple discrete IHs at disparate sites)

**c. Utilize a standardized assessment to risk stratify:**

i. Associated tools: IH CPG [Supplemental Table 22](#); [Figures 2-4](#)

ii. **Identify patients with multiple (5 or more) cutaneous hemangiomas.** *Patients with multiple (5 or more) cutaneous hemangiomas, regardless of individual cutaneous hemangioma features, are at risk for liver hemangioma(s) which can be life threatening and immediate (<1 week) abdominal ultrasound (US) is required to evaluate for liver hemangioma(s).*

**1. Patient has fewer than 5 cutaneous hemangiomas:**

- a. **Assess all cutaneous hemangiomas individually** for other highest-, high-, intermediate-, and low-risk features and categorize patient's overall risk based on the single highest-risk feature for any hemangioma. **Proceed to 2.c.iii.**

**2. Patient has 5 or more cutaneous hemangiomas AND abdominal US is NEGATIVE for liver hemangioma(s):**

- a. **Assess all cutaneous hemangiomas individually** for other highest-, high-, intermediate-, and low-risk features and categorize patient's overall risk based on the single highest-risk feature for any hemangioma. **Proceed to 2.c.iii.**

**3. Patient has 5 or more cutaneous hemangiomas AND abdominal US is POSITIVE for liver hemangioma(s):**

- a. Identify patient as "highest-risk" below (2.c.iii) and proceed to "Diagnosis and Disposition" (3).

iii. Identify **highest-risk** features for each cutaneous hemangioma. Final risk stratification is based on the single highest-risk feature for any hemangioma:

- Large (>5cm) or segmental on face or scalp
- Beard area
- Large (>5cm) or segmental in lumbosacral or perineal area
- Periocular location
- Multifocal, (5 or more) AND abdominal ultrasound reveals liver hemangioma(s)

iv. Identify **high-risk** features for each cutaneous hemangioma. Final risk stratification is based on the single highest-risk feature for any hemangioma:

- Large (>5cm) located on trunk or extremities
- Facial location  $\geq 2$  cm (>1cm in patient  $\leq 3$  mos of age)
- Lip or Oral Cavity
- Nasal tip, columella
- Neck or scalp location >2cm
- Breast location
- Ulcerated hemangioma at any site

v. Identify **intermediate-risk** features for each cutaneous hemangioma. Final risk stratification is based on the single highest-risk feature for any hemangioma:

- Perineal location without ulceration
- Trunk or extremity location >2cm with “ledge effect” ([IH Example Photos](#))

vi. Identify **low-risk** features for each cutaneous hemangioma. Final risk stratification is based on the single highest-risk feature for any hemangioma:

- <2cm and located on trunk or extremities and easily covered by clothing, OR
- $\geq 2$ cm on trunk or extremities WITHOUT “ledge effect” ([IH Example Photos](#))

### **3. Diagnosis and Final Risk Assessment**

- a. Final IH type: \_\_\_\_\_
- b. Final IH risk (highest, high, intermediate, low) \_\_\_\_\_

## 4. Disposition after Initial Assessment

### a. Highest-risk:

- i. Consultation<sup>1</sup> with hemangioma specialist occurs immediately (within 1 week)
- ii. Hemangioma specialist: \_\_\_\_\_
- iii. Date of consultation with hemangioma specialist: \_\_\_\_\_
  1. Optimally, this consultation occurs within 1 week of this assessment
- iv. Caregivers receive standardized information about infantile hemangioma
  1. Associated tool: [What Are Hemangiomas?](#)

### b. High-risk:

- i. Consultation with hemangioma specialist occurs promptly (within 2 weeks)
- ii. Hemangioma specialist: \_\_\_\_\_
- iii. Date of consultation with hemangioma specialist: \_\_\_\_\_
  1. Optimally, this consultation occurs within 2 weeks of this assessment
- iv. Caregivers receive standardized information about infantile hemangioma
  1. Associated tool: [What Are Hemangiomas?](#)

### c. Intermediate-risk:

- i. Repeat evaluation every 2 to 4 weeks until age 3 months (or older if IH growth continues).
- ii. Date of next evaluation: \_\_\_\_\_
- iii. Caregivers receive standardized information about infantile hemangioma
  1. Associated tool: [What Are Hemangiomas?](#)
- iv. Emphasize to caregivers that they should monitor for ulceration and/or bleeding and call with these or any other concerns
- v. Consultation or referral to hemangioma specialist can occur at any time if provider and/or caregiver have concerns and/or desire an additional opinion

### d. Low-risk:

- i. Repeat evaluation at next well child visit
- ii. Date of next evaluation: \_\_\_\_\_
- iii. Caregivers receive standardized information about infantile hemangioma
  1. Associated tool: [What Are Hemangiomas?](#)
- iv. Emphasize to caregivers that they should monitor for ulceration and/or bleeding and call with these or any other concerns
- v. Consultation or referral to hemangioma specialist can occur at any time if provider and/or caregiver have concerns and/or desire an additional opinion

*1. Consultation for management strategy means reciprocal communication with a hemangioma specialist and may include patient visits, telephone communication with sharing of patient images and/or telehealth supported patient interactions. If photographs are used, parents/clinicians are advised to send one photograph taken from 12" to 18" (for perspective and anatomic context) and one closer view. Parents should also be advised to measure the diameter of the lesion.*

*IH Example Photos can be found at the following URL: [https://downloads.aap.org/DOCCSA/CPG\\_IH\\_Example\\_Photos.pdf](https://downloads.aap.org/DOCCSA/CPG_IH_Example_Photos.pdf)*