



## The 65th ASH Annual Meeting Abstracts

**ONLINE PUBLICATION ONLY****901.HEALTH SERVICES AND QUALITY IMPROVEMENT - NON-MALIGNANT CONDITIONS****Characterizing Outpatient Classical Hematology Referrals at an Academic Healthcare System**

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**BACKGROUND:**

Healthcare systems and delivery networks are experiencing an overwhelming number of Classical Hematology (CH) referrals. In our network, patients referred for CH consultation are facing increasing wait times and a shortage of available clinicians. In response to these workforce challenges, our institution is collaborating with advanced practice providers (APPs) to evaluate new patients using a tiered system that matches consults with corresponding years of clinical experience. This model is in use at one clinical site but its potential benefit when implemented across the entire network is unknown. To better inform this initiative, we sought to identify the most common diagnoses for outpatient CH referrals, determine the complexity level of these consults, and identify opportunities for alternative patient scheduling workflows.

**METHODS:**

A list of all new outpatient CH referrals evaluated in the Yale Smilow Cancer Network in Connecticut from 2019-2021 was compiled. ICD-10 codes assigned from each new patient encounter were combined into general diagnosis categories including iron deficiency anemia, other anemias, and thrombosis. After the 3 most common diagnoses were identified, 30 new patients evaluated in 2021 were randomly selected from each diagnosis group for manual chart review. Manual review focused on the details of each patient case and assigned a diagnosis level (Table 1). Diagnosis levels were matched with APP years of experience, ranging from level 1 (consults that could be evaluated within the first few years of practice) to level 3 (cases requiring more extensive experience or physician evaluation). These levels were predetermined by a committee of senior level CH physicians in the Smilow network.

**RESULTS:**

Based on grouped ICD diagnosis codes, the 3 most common CH referrals to our network from 2019-2021 were anemia (excluding iron deficiency, with an average of 22.4% of all new referrals), iron deficiency anemia (21.2%), and thrombosis (13.2%). Combined, these 3 diagnoses accounted for 56.8% of all incoming new referrals.

Manual chart review of the anemia group showed that 3 patients had iron deficiency anemia with a diagnosis level of 1. After excluding these 3 patients, 1/27 (3.7%) anemia patients were level 1, 9/27 (33.3%) were level 2, and 17/27 (63.0%) patients were level 3 (Figure 1). In the iron deficiency group, after accounting for the 3 additional patients transferred from the anemia group, 16/33 (48.5%) were level 1, 7/33 (21.2%) were level 2, and 10/33 (30.3%) were level 3. In the thrombosis group, 12/30 (40.0%) patients were level 2, and 18/30 (60.0%) were level 3. 18.9% of all reviewed charts were level 1, 31.1% were level 2, and 50.0% were level 3.

**CONCLUSIONS:**

Manual chart review of the most common CH referrals (anemia, iron deficiency anemia, thrombosis) showed heterogeneity in diagnosis level. Thrombosis and anemia (excluding iron deficiency) had a higher proportion of more complex cases. In contrast, iron deficiency anemia contained a substantial number of level 1 cases (approximately 50% of all iron deficiency referrals).

At one of our clinical sites, CH trained APPs have been evaluating new consults using the tiered system described within this study. Patients are then seen in follow-up by a collaborating physician. Manual chart review showed that 50% of consults in the 3 most common referral categories were either level 1 or 2, representing a substantial patient population that could be

evaluated by an APP for initial consultation. In addition to increasing trainee and physician recruitment, implementing this model on a network-wide scale may be an invaluable strategy to address the current CH workforce shortage. Our study also identified that iron deficiency contained a large proportion of level 1 cases. This may be a consult population that is particularly amenable to non-traditional triage and evaluation algorithms. Strategies to consider include eConsultations to facilitate faster evaluation and iron infusions when indicated, or specialized provider and clinic creation. Our institution is piloting the use of triage algorithms to identify these uncomplicated iron deficiency cases and further optimize consult workflows.

**Disclosures** No relevant conflicts of interest to declare.

Table 1: Diagnosis levels

Level	Description
1	Nutritional anemia, hemochromatosis, evaluation of bleeding disorder, uncomplicated DVT of lower extremity (treated with standard therapy with evidence of response, or if seen at time of DVT no evidence for phlegmasia or bleeding disorder)
2	Anemia of moderate complexity, thrombocytopenia, uncomplicated DVT or PE, established hereditary bleeding disorder (von Willebrand disease, hemophilia, etc.), hypercoagulable work up, thrombocytosis, erythrocytosis, MGUS, leukocytosis
3	Venous thrombosis at atypical sites (e.g., portal vein), arterial thrombosis, refractory ITP, TTP, PNH, highly complex anemia, eosinophilia, leukopenia, other complexity beyond categories 1 and 2

Figure 1: Diagnosis levels within anemia, iron deficiency anemia, and thrombosis groups

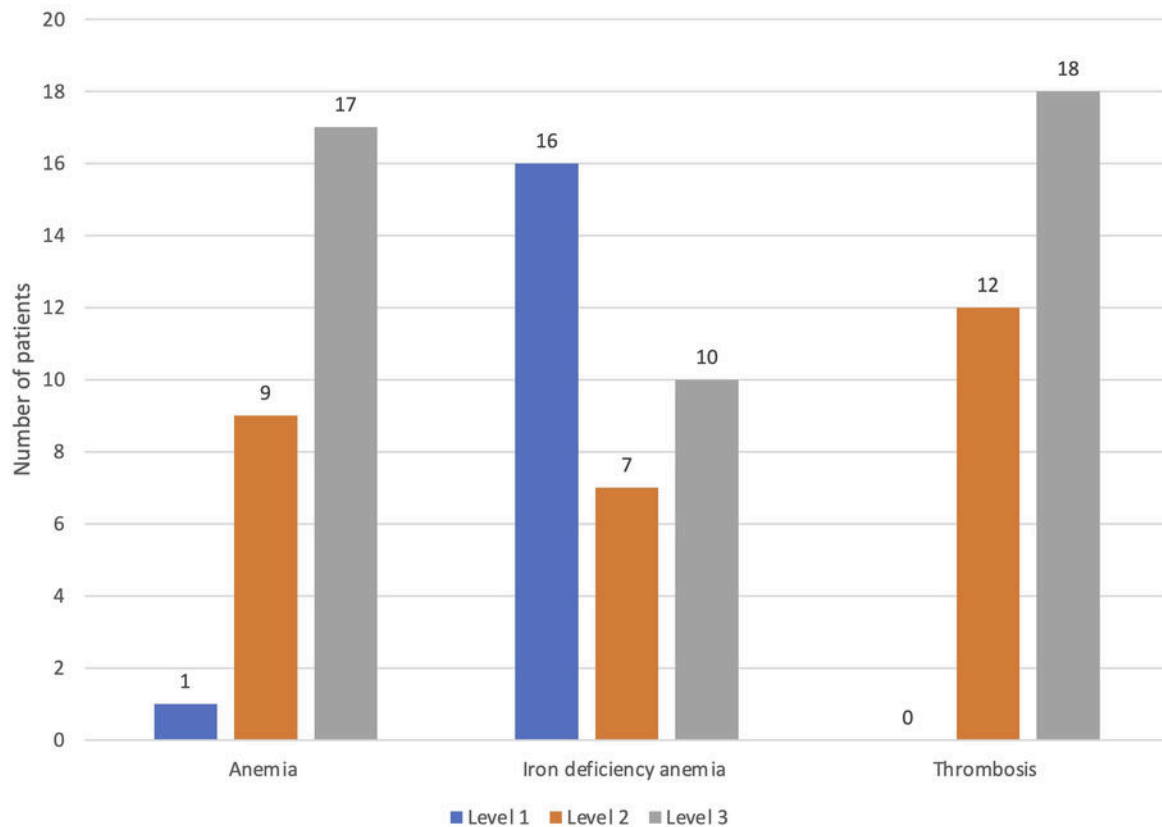


Figure 1

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