Ferric Derisomaltose Achieves Highest Likelihood of ≥1,000 mg Dose Administered and Lowest Outpatient Transfusion Rates Among IV Iron Therapies in Women with Iron Deficiency Anemia and Abnormal Uterine Bleeding: A Real-World Analysis

[1]Annette von Drygalski M.D. Pharm.D., [2]Patrick Boland M.D., [3]Manale Maksour Pharm.D., [4]Michael Polson Pharm.D. M.S., [5]Magdalena Lewandowska M.D.
1. UCSD, San Diego, CA, USA; 2. New England Cancer Specialists, Scarborough, ME, USA; 3. American Oncology Network, Fort Myers, FL, USA; 4. Pharmacosmos Therapeutics Inc., Morristown, NJ, USA; 5. Innovative Hematology, Indianapolis, IN, USA.

BACKGROUND

Abnormal uterine bleeding (AUB), a common gynecologic condition, can lead to iron deficiency anemia (IDA) and other health complications.[1-7]

IDA increases risk of significant complications, including cardiovascular morbidity, neurocognitive impairment, and work capacity.[2-4]

Based on real-world utilization, IDA is associated with at least an estimated 1,000 mg deficit.[1-3]

Intravenous (IV) iron products indicated for the treatment of IDA vary in FDA-approved dosages. Products that require 1–2 infusions include ferric derisomaltose (FDI), ferric carboxymaltose (FCM), and ferumoxytol (FXT); those requiring ≥3 infusions are iron sucrose (IS), iron dextran (ID), and sodium ferric gluconate (SFG).[8]

Furthermore, the impact of IV iron product selection on the need for outpatient blood transfusions in women with AUB is not well understood.

OBJECTIVES

Describe the patterns of IV iron utilization among women with AUB, including product-specific usage rates.

Evaluate the IV iron dose administered and utilization of high-dose IV irons against approved product label.

Examine the impact of IV iron therapy on the reduction of outpatient blood transfusions in women with AUB.

METHODS

This retrospective observational study was performed leveraging US administrative claims data of commercially insured patients from Komodo's Healthcare Map.

The date of first IV iron administration between January 2020 and June 2024 was considered the index date.

Figure 1. Inclusion and Exclusion Criteria

Inclusion Criteria:
- Female and 18-50 years of age
- ≥1 record of diagnosis of AUB
- ≥1 record of diagnosis for IDA
- ≥1 claim for IV iron during the index period
- Commercially insured with ≥6 months continuous coverage before the index date and ≥6 months following the index date

Exclusion Criteria:
- ≥1 claim for the following diagnoses within the study period:
  - Cancer
  - IBD
  - CKD/ESRD
  - HF
  - Hereditary hemorrhagic telangiectasia
  - Hospice/End of life case
- CCI >0

Iron utilization is the cumulative amount of iron administered in the 6-week period starting on the index date.

Outpatient transfusions were found using a combination of procedure codes, both CPT and ICD-10-PCS.

A threshold of ≥1,000 mg of iron administered was selected based on FDA approved doses of Ferric Carboxymaltose (FCM), Ferric Derisomaltose (FDI), and Ferumoxytol (FXT).

Likelihood to receive ≥1,000 mg of iron is based on a binomial regression model.

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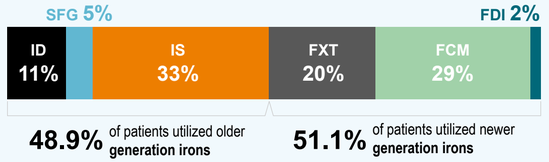
ABBREVIATIONS

AUB – Abnormal Uterine Bleeding; **CCI –** Charlson Comorbidity Index; **CKD –** Chronic Kidney Disease; **CPT –** Current Procedural Terminology; **HF –** Heart Failure; **IBD –** Inflammatory Bowel Disease; **IDA –** Iron Deficiency Anemia; **IV –** Intravenous; **US –** United States

RESULTS

- A total of **35,646** women were evaluated. The **average age** was **39.5 ± 8 years**.

Figure 2. Distribution of IV Iron Use Among Included Patient Population

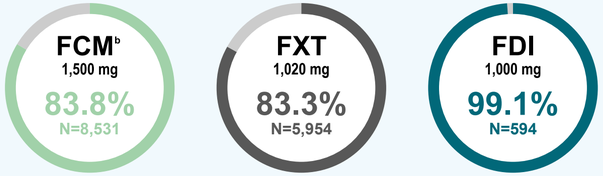


- The median IV iron dose administered was: ID 1,000 mg; FG 263 mg; IS 800 mg; FXT 1,020 mg; FCM 1500 mg; FDI 1000 mg.
- Patients using **newer generation irons** had **less variability in dosing** and **higher median dose**.
- After adjusting for age, there was **no significant difference** in the likelihood of **receiving ≥1,000 mg of IV iron** between **FCM** and **FXT** (p=0.241).
- Patients receiving **FDI** had **22.4 times higher odds of receiving ≥1,000 mg of iron** compared to **FXT** (p<0.001; CI: 11.1 – 48.8).

FCM – Ferric Carboxymaltose; **FDI –** Ferric Derisomaltose; **FXT –** Ferumoxytol; **ID –** Iron Dextran; **IS –** Iron Sucrose; **SFG –** Sodium Ferric Gluconate

- **FDI** had the **highest proporion** of patients **receiving the FDA-approved dose**.

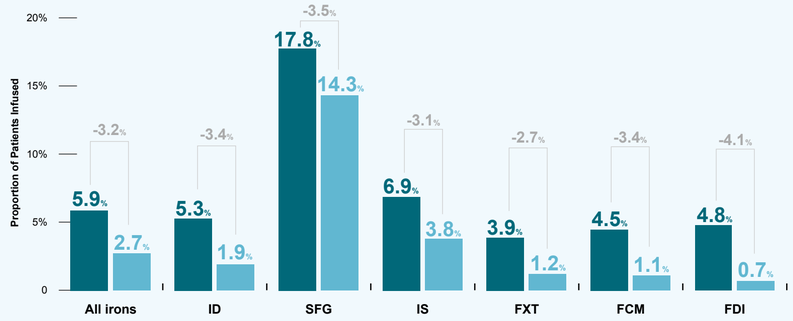
Figure 3. Proportion of Patients Who Were Administered an FDA-Approved Dose (Per Package Insert) of IV Iron[a]



[a]It is assumed that all patients were over 50 kg, [b]It was not possible to determine whether FCM 1,000 mg or 1,500 mg was ordered. Using a 1,000 mg threshold results in 84% achieving administration of the approved dosage.

- **FDI** had the **lowest proportion** of patients **requiring follow-up outpatient blood transfusions**.

Figure 4. Proportion of Patients Receiving Outpatient Blood Transfusions in the Baseline and Follow-up Periods



LIMITATIONS

This study was conducted on adminstrative claims data. Clinical and laboratory information were not available for these patients. The data is generalizable only to commercially insured women of childbearing age. Services not billed to a health plan are not included in the data and there may be errors in medical coding.

CONCLUSIONS

The amount of IV iron received among women with IDA and AUB varies considerably.

Patients receiving FDI had 22.4 times higher odds of receiving ≥1,000 mg compared to FXT, demonstrating the benefit of a single, high-dose IV iron.

Furthermore, while all IV irons reduced blood transfusions, FDI was associated with the lowest rate of follow-up transfusions.

Given that each unit of packed red blood cells requires 220-250 mg of iron, adequate correction of IDA with the appropriate amount of IV iron may reduce morbidity.

REFERENCES

1. Munro MG, et al. *Fertil Steril.* 2011;95(7):2204-2208.e3. **2.** McDonagh TA, et al. *Eur Heart J.* 2023 Oct 1;44(37):3627-3639. **3.** Beard JL. *J Nutr.* 2003;133(5 Suppl 1):1468S-1472S. **4.** Scholl TO. *Am J Clin Nutr.* 2005;81(5):1218S–1222S. **5.** Haas JD, et al. *J Nutr.* 2001;131(2S-2):676S–688S. **6.** Chang M, et al. Presented at: *NCODA International Spring Forum; April 23–25, 2025; Dallas, TX.* **7.** Ozment CP, et al. *Biochim Biophys Acta.* 2009;1790(7):694-701. **8.** Polson MK, et al. *J Manag Care Spec Pharm.* 2023;29(7):818-824.