ONLINE SUPPLEMENTARY MATERIALS

Transfusion Practice Patterns in Patients With Anemia Receiving Myelosuppressive Chemotherapy for Nonmyeloid Cancer: Results From a Prospective Observational Study

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Online Resource 1. Study survey/questionnaire

Appendix C. Sample CRF

Site Attributes: **ESA Use:**
☐ Yes ☐ No   ☐ Academic ☐ Non-academic

- -

Subject sex:

Subject age: ☐ **years**   ☐ Male ☐ Female

[DD/ MMM/YYYY]
Date of diagnosis for cancer

- -

Primary solid tumor type:
☐ Anal cancer   ☐ Melanoma skin cancer
☐ Bladder cancer   ☐ Non-melanoma skin cancer

Stage of primary solid tumor:
☐ Bone/sarcoma   ☐ Ovarian cancer
☐ Stage IV (non-curative) ☐ Brain cancer   ☐ Pancreatic cancer
☐ Stage IV (curative)   ☐ Breast cancer   ☐ Prostate cancer
☐ Cervical cancer   ☐ Rectal cancer
☐ Colon cancer   ☐ Renal cancer
☐ Esophageal cancer   ☐ Stomach cancer
☐ Head &neck cancer   ☐ Testicular cancer

*If SCLC, specify:
☐ Intestine cancer   ☐ Thyroid cancer
☐ Extensive   ☐ Liver cancer   ☐ Uterine cancer
☐ Limited   ☐ Small cell lung cancer* ☐ Other: _____
☐ Unknown   ☐ Non-small cell lung cancer

- -

Chemotherapy Treatment:

[DD/ MMM/YYYY]
Date of last cycle chemotherapy

☐ Platinum   ☐ Non- platinum

If a standard regimen was given, which of the following regimens was used?
☐ Cyclophosphamide + Doxorubicin
☐ Cyclophosphamide + Epiribucin
☐ Cyclophosphamide + Docetaxel+ Doxorubicin
☐ Cyclophosphamide + Docetaxel+ Traztuzumab
☐ Cyclophosphamide + 5-Fluorouracil + Doxorubicin
☐ Cyclophosphamide + 5-Fluorouracil + Epiribicin
☐ Cyclophosphamide + 5-Fluoruracil + Methotrexate
☐ Docetaxel + Doxorubicin
☐ Docetaxel + Gemcitabine
☐ Dose dense Doxorucin + Cyclophosphamide + Docetaxel

- -

If a standard regimen was **not** given, which of the following agents was given to the subject?
(Check all that apply)
☐ 5-FU   ☐ Gemcitabine
☐ Bevacizumab   ☐ Lapatinib
☐ Capecitabine   ☐ Methotrexate
☐ Cyclophosphamide   ☐ Paclitaxel
☐ Docetaxel   ☐ Traztuzumab
☐ Doxorubicin   ☐ Vinorelbine
☐ Epirubicin   ☐ Other If Other, specify_____

Anemia relevant co-morbidities? ☐ Yes ☐ None

→ ☐ Congestive heart failure or coronary heart disease
→ ☐ Chronic pulmonary disease
→ ☐ Cerebral vascular disease

- -

Last hemoglobin value prior transfusion: [_ . _] g/dL   [DD/ MMM /YYYY]
Date of hemoglobin draw

- -

Where there any signs/symptoms related to anemia? ☐ Yes ☐ No → asymptomatic

→ ☐ Sustained tachycardia   _____
→ ☐ Tachypnea   _____
→ ☐ Chest pain/pectoral angina   _____
→ ☐ Postural hypotension   _____
→ ☐ Dyspnea on exertion   _____
→ ☐ Lightheadedness   _____
→ ☐ Syncope   _____
→ ☐ Fatigue   _____
→ ☐ Pallor   _____

If there are multiple symptoms, please mark the most important sign or symptom with an X ──────────────→ ↑

- -

Please order from 1 to 3 with 1 being the most important trigger and 3 being least important trigger for RBC transfusion

☐ Low hemoglobin
☐ Medical history
☐ Anemia symptoms

- -

PRBC Transfusion: [DD/ MMM /YYYY]   [_ | _] units
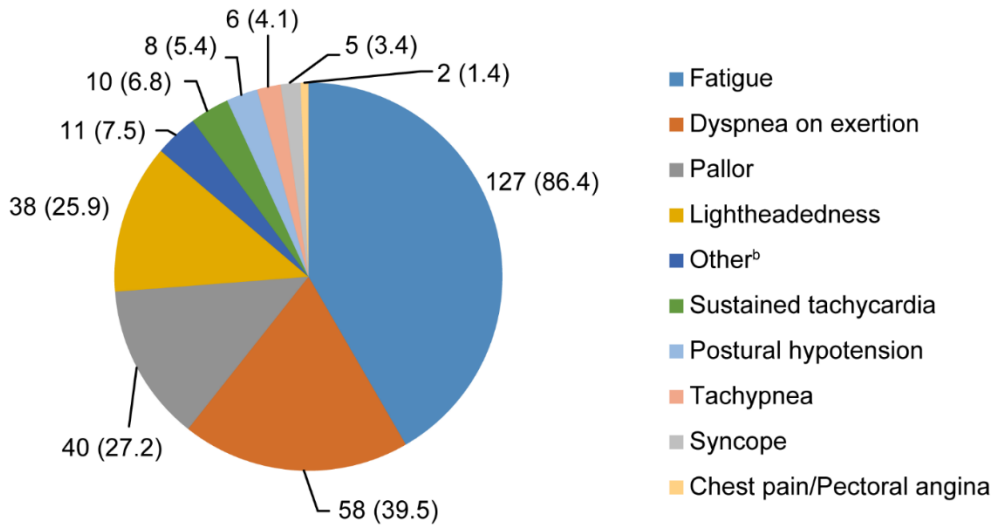Date of transfusion

5-FU = 5-fluorouracil; CRF = case report form; ESA = erythropoiesis-stimulating agent; PRBC = packed red blood cell; RBC = red blood cell; SCLC = small cell lung cancer.

Online Resource 2. Characteristics of enrolling sites

Characteristic	Recruited Study Sites N = 25 n (%)	Study Sites That Enrolled Patients N = 18 n (%)
Location of site		
Urban	11 (44.0)	10 (55.6)
Suburban	10 (40.0)	4 (22.2)
Rural	4 (16.0)	4 (22.2)
Site type		
Academic	2 (8.0)	2 (11.1)
Nonacademic	23 (92.0)	16 (88.9)
Transfusion center on site		
Yes	9 (36.0)	8 (44.4)
No	16 (64.0)	10 (55.6)
Routine usage of erythropoiesis-stimulating agents		
Yes	18 (72.0)	12 (66.7)
No	7 (28.0)	6 (33.3)

Online Resource 3: Proportions of patients with specific signs and symptoms of anemia, and signs and symptoms of anemia affecting the decision to prescribe a PRBC transfusion. Data are shown as n (%). [a]Patients could be included in > 1 symptom category but were included only once within each category. [b]Not specified. [c]One patient was excluded as the Hb value was measured after a PRBC transfusion. Hb = hemoglobin; PRBC = packed red blood cell.

a. Signs and symptoms of anemia (N = 147)[a]

Legend:
- Fatigue
- Dyspnea on exertion
- Pallor
- Lightheadedness
- Other[b]
- Sustained tachycardia
- Postural hypotension
- Tachypnea
- Syncope
- Chest pain/Pectoral angina

Values: 6 (4.1), 8 (5.4), 5 (3.4), 10 (6.8), 2 (1.4), 11 (7.5), 127 (86.4), 38 (25.9), 40 (27.2), 58 (39.5)

b. Signs and symptoms of anemia affecting the decision to prescribe a PRBC transfusion (N = 146)[a,c]

Legend:
- Fatigue
- Dyspnea on exertion
- Pallor
- Lightheadedness
- Other[b]
- Sustained tachycardia
- Postural hypotension
- Tachypnea
- Syncope
- Chest pain/Pectoral angina

Values: 5 (3.4), 4 (2.7), 4 (2.7), 9 (6.2), 2 (1.4), 6 (4.1), 101 (69.2), 31 (21.2), 33 (22.6), 49 (33.6)
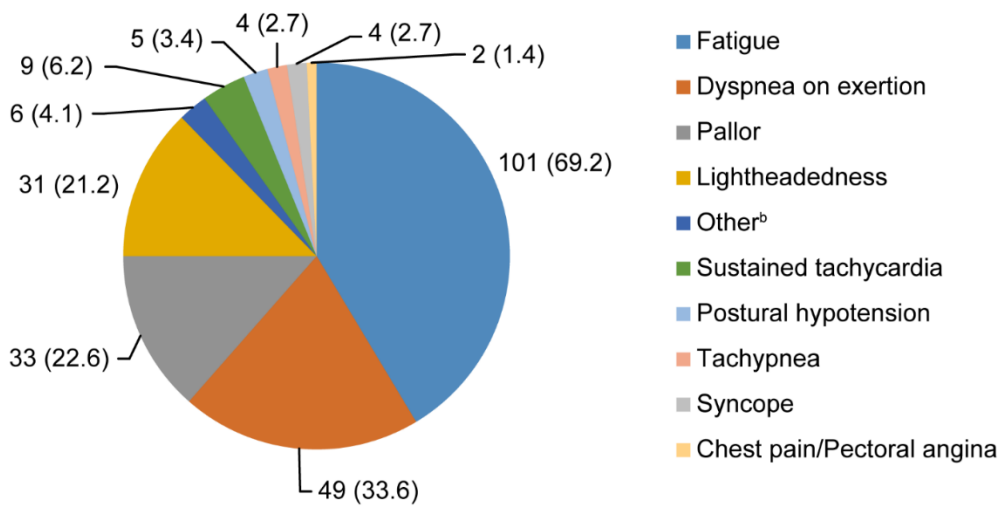
Online Resource 4. Primary clinical considerations for prescribing a PRBC transfusion stratified

by sex and age

Baseline Covariate / Primary Clinical Consideration for PRBC Transfusion	Patients Who Received a PRBC Transfusion N = 147	
	n (%)	95% CI (%)
Sex		
Female	n = 100	
Anemia symptoms	76 (76.0)	66.4, 84.0
Hb value	23 (23.0)	15.2, 32.5
Medical history	1 (1.0)	0.0, 5.4
Male	n = 47	
Anemia symptoms	30 (63.8)	48.5, 77.3
Hb value	14 (29.8)	17.3, 44.9
Medical history	3 (6.4)	1.3, 17.5
Age		
< 65 years	n = 66	
Anemia symptoms	53 (80.3)	68.7, 89.1
Hb value	12 (18.2)	9.8, 29.6
Medical history	1 (1.5)	0.0, 8.2
≥ 65 years	n = 81	
Anemia symptoms	53 (65.4)	54.0, 75.7
Hb value	25 (30.9)	21.1, 42.1
Medical history	3 (3.7)	0.8, 10.4

Physicians selected the "most important (primary) consideration," "second-most important consideration," or "least important consideration" from the list of 3 considerations of anemia symptoms, Hb value, or medical history (including comorbidities).
CI = confidence interval; Hb = hemoglobin; PRBC = packed red blood cell.

Online Resource 5. Primary clinical considerations for prescribing a PRBC transfusion by

primary tumor type

Baseline Covariate / Primary Clinical Consideration for PRBC Transfusion	Patients Who Received a PRBC Transfusion N = 147	
	n (%)	95% CI (%)
Gynecological cancer	n = 37	
Anemia symptoms	26 (70.3)	53.0, 84.1
Hb value	10 (27.0)	13.8, 44.1
Medical history	1 (2.7)	0.1, 14.2
Non-small cell lung cancer	n = 30	
Anemia symptoms	23 (76.7)	57.7, 90.1
Hb value	7 (23.3)	9.9, 42.3
Medical history	0	
Small cell lung cancer	n = 24	
Anemia symptoms	18 (75.0)	53.3, 90.2
Hb value	5 (20.8)	7.1, 42.2
Medical history	1 (4.2)	0.1, 21.1
Gastrointestinal cancer	n = 10	
Anemia symptoms	9 (90.0)	55.5, 99.7
Hb value	1 (10.0)	0.3, 44.5
Medical history	0	
Breast cancer	n = 14	
Anemia symptoms	9 (64.3)	35.1, 87.2
Hb value	5 (35.7)	12.8, 64.9
Medical history	0	
Urogenital cancer	n = 7	
Anemia symptoms	6 (85.7)	42.1, 99.6
Hb value	0	
Medical history	1 (14.3)	0.4, 57.9
Other[a]	n = 25	
Anemia symptoms	15 (60.0)	38.7, 78.9
Hb value	9 (36.0)	18.0, 57.5
Medical history	1 (4.0)	0.1, 20.4

Physicians selected the "most important (primary) consideration," "second-most important consideration," or "least important consideration" from the list of 3 considerations of anemia symptoms, Hb value, or medical history (including comorbidities).
[a]Includes bone/sarcoma, brain, head and neck, skin, thyroid, hematological cancers, other gastrointestinal cancers, and missing.
CI = confidence interval; Hb = hemoglobin; PRBC = packed red blood cell.

Online Resource 6. Primary clinical considerations for prescribing a PRBC transfusion by

chemotherapy type and line

Baseline Covariate / Primary Clinical Consideration for PRBC Transfusion	Patients Who Received a PRBC Transfusion N = 147	
	n (%)	95% CI (%)
Chemotherapy type		
Platinum	n = 107	
Anemia symptoms	79 (73.8)	64.4, 81.9
Hb value	25 (23.4)	15.7, 32.5
Medical history	3 (2.8)	0.6, 8.0
Non-platinum	n = 40	
Anemia symptoms	27 (67.5)	50.9, 81.4
Hb value	12 (30.0)	16.6, 46.5
Medical history	1 (2.5)	0.1, 13.2
Chemotherapy line		
First line	n = 95	
Anemia symptoms	67 (70.5)	60.3, 79.4
Hb value	26 (27.4)	18.7, 37.5
Medical history	2 (2.1)	0.3, 7.4
Second line	n = 52	
Anemia symptoms	39 (75.0)	61.1, 86.0
Hb value	11 (21.2)	11.1, 34.7
Medical history	2 (3.8)	0.5, 13.2

Physicians selected the "most important (primary) consideration," "second-most important consideration," or "least important consideration" from the list of 3 considerations of anemia symptoms, Hb value, or medical history (including comorbidities).
CI = confidence interval; Hb = hemoglobin; PRBC = packed red blood cell.

Online Resource 7. Primary clinical considerations for prescribing a PRBC transfusion by site

type

Baseline Covariate / Primary Clinical Consideration for PRBC Transfusion	Patients Who Received a PRBC Transfusion N = 147	
	n (%)	95% CI (%)
Academic	n = 40	
Anemia symptoms	30 (75.0)	58.8, 87.3
Hb value	8 (20.0)	9.1, 35.6
Medical history	2 (5.0)	0.6, 16.9
Nonacademic	n = 107	
Anemia symptoms	76 (71.0)	61.5, 79.4
Hb value	29 (27.1)	19.0, 36.6
Medical history	2 (1.9)	0.2, 6.6

Physicians selected the "most important (primary) consideration," "second-most important consideration," or "least important consideration" from the list of 3 considerations of anemia symptoms, Hb value, or medical history (including comorbidities).
CI = confidence interval; Hb = hemoglobin; PRBC = packed red blood cell.