

Section 30
Myelodysplastic Syndromes (MDS), Chronic Myeloproliferative Disorders (CMD), and
Chronic Myelomonocytic Leukemia (CMML)

This section includes Myelodysplastic Syndromes (MDS), Chronic Myeloproliferative Disorders (CMD), and Chronic Myelomonocytic Leukemia (CMML). In the 3rd edition of the International Classification of Diseases for Oncology, the behavior code of myelodysplastic syndromes and chronic myeloproliferative disorders was changed from /1, borderline malignancy or low malignant potential, to /3, malignant primary site. These diagnoses became reportable for cases diagnosed in 2001+ when ICD-O-3 went into effect. CMML has been reportable for all years. CMML is included here and in the leukemia section.

Table 30.1

Myelodysplastic Syndromes, Chronic Myeloproliferative Disorders, and Chronic Myelomonocytic Leukemia

Counts, Percents and Age-Adjusted Incidence Rates^a for the 21 SEER Geographic Areas by Subtype, 2012-2016

Site	Both Sexes			Males			Females		
	Count	Percent	Rate	Count	Percent	Rate	Count	Percent	Rate
Total	51,194	100.0%	8.1	27,832	100.0%	10.2	23,362	100.0%	6.6
Myelodysplastic Syndromes (MDS)	28,138	100.0%	4.5	16,274	100.0%	6.2	11,864	100.0%	3.3
Refractory anemia (RA), NOS	1,478	5.3%	0.2	805	4.9%	0.3	673	5.7%	0.2
RA with ringed sideroblasts	1,640	5.8%	0.3	936	5.8%	0.4	704	5.9%	0.2
RA with excess blasts (RAEB)	4,596	16.3%	0.7	2,838	17.4%	1.0	1,758	14.8%	0.5
RAEB in transformation	-	-	-	-	-	-	-	-	-
Refractory cytopenia w/multilineage dysplasia	2,216	7.9%	0.4	1,475	9.1%	0.6	741	6.2%	0.2
Myelodysplastic syndrome with 5q deletion	1,038	3.7%	0.2	414	2.5%	0.2	624	5.3%	0.2
Therapy-related myelodysplastic syndrome	-	-	-	-	-	-	-	-	-
Myelodysplastic syndrome, NOS	17,170	61.0%	2.7	9,806	60.3%	3.8	7,364	62.1%	2.0
Chronic Myeloproliferative Disorders (CMD)	20,095	100.0%	3.1	9,704	100.0%	3.3	10,391	100.0%	3.0
Polycythemia vera	8,347	41.5%	1.3	4,672	48.1%	1.6	3,675	35.4%	1.0
Chronic myeloproliferative disease, NOS	-	-	-	-	-	-	-	-	-
Myelosclerosis with myeloid metaplasia	2,361	11.7%	0.4	1,392	14.3%	0.5	969	9.3%	0.3
Essential thrombocythemia	9,145	45.5%	1.4	3,493	36.0%	1.2	5,652	54.4%	1.7
Chronic neutrophilic leukemia	55	0.3%	0.0	29	0.3%	0.0	26	0.3%	0.0
Hypereosinophilic syndrome	187	0.9%	0.0	118	1.2%	0.0	69	0.7%	0.0
Chronic Myelomonocytic Leukemia (CMML)	2,961	100.0%	0.5	1,854	100.0%	0.7	1,107	100.0%	0.3

Source: SEER 21 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta, San Jose-Monterey, Los Angeles, Alaska Native Registry, Rural Georgia, California excluding SF/SJM/LA, Kentucky, Louisiana, New Jersey, Georgia excluding ATL/RG, Idaho, New York and Massachusetts).

^a Rates are age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130).

- Statistic not shown due to fewer than 16 cases during the time period.

Table 30.2

Myelodysplastic Syndromes, Chronic Myeloproliferative Disorders, and
Chronic Myelomonocytic Leukemia

Age-Adjusted Incidence Rates^a for the 21 SEER Geographic Areas by Age and Race, 2012-2016

Site	Both Sexes		Males		Females	
	Rate	Count	Rate	Count	Rate	Count
Myelodysplastic Syndromes (MDS)						
By age						
Ages <40	0.1	438	0.1	222	0.1	216
Ages 40-49	0.7	549	0.7	280	0.7	269
Ages 50-59	2.1	1,764	2.5	1,010	1.8	754
Ages 60-69	8.2	4,868	10.5	2,920	6.2	1,948
Ages 70-79	26.9	8,579	36.4	5,154	19.3	3,425
Ages 80+	55.4	11,940	83.8	6,688	38.5	5,252
By race						
All Races	4.5	28,138	6.2	16,274	3.3	11,864
White	4.7	23,870	6.5	14,017	3.4	9,853
Black	3.6	2,206	4.7	1,129	2.9	1,077
Asian/Pacific Islander	3.0	1,632	4.0	904	2.3	728
American Indian/Alaska Native ^b	2.7	80	3.8	51	1.9	29
Hispanic ^c	3.2	2,183	4.1	1,158	2.6	1,025
Chronic Myeloproliferative Disorders (CMD)						
By age						
Ages <40	0.5	1,500	0.5	705	0.5	795
Ages 40-49	2.3	1,787	2.5	958	2.1	829
Ages 50-59	4.1	3,338	4.7	1,861	3.6	1,477
Ages 60-69	8.3	4,939	9.0	2,530	7.7	2,409
Ages 70-79	14.3	4,594	14.8	2,126	13.9	2,468
Ages 80+	18.6	3,937	19.2	1,524	18.2	2,413
By race						
All Races	3.1	20,095	3.3	9,704	3.0	10,391
White	3.2	16,325	3.4	7,912	3.1	8,413
Black	2.8	2,001	3.0	933	2.7	1,068
Asian/Pacific Islander	1.9	1,140	2.1	566	1.8	574
American Indian/Alaska Native ^b	1.7	60	1.8	31	1.6	29
Hispanic ^c	2.0	1,697	2.1	834	1.9	863
Chronic Myelomonocytic Leukemia (CMML)						
By age						
Ages <40	0.0	30	-	-	0.0	19
Ages 40-49	0.1	47	0.1	20	0.1	27
Ages 50-59	0.2	177	0.3	117	0.1	60
Ages 60-69	1.1	655	1.6	451	0.7	204
Ages 70-79	3.2	1,020	4.6	657	2.1	363
Ages 80+	4.9	1,032	7.5	598	3.3	434
By race						
All Races	0.5	2,961	0.7	1,854	0.3	1,107
White	0.5	2,535	0.7	1,613	0.3	922
Black	0.4	229	0.5	123	0.3	106
Asian/Pacific Islander	0.3	163	0.4	96	0.2	67
American Indian/Alaska Native ^b	-	-	-	-	-	-
Hispanic ^c	0.3	206	0.4	124	0.2	82

Source: SEER 21 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta, San Jose-Monterey, Los Angeles, Alaska Native Registry, Rural Georgia, California excluding SF/SJM/LA, Kentucky, Louisiana, New Jersey, Georgia excluding ATL/RG, Idaho, New York and Massachusetts).

^a Rates are age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130).

^b Incidence data for American Indian/Alaska Native are based on the PRCDA (Purchased/Referred Care Delivery Areas) counties.

^c Hispanics are not mutually exclusive from whites, blacks, Asian/Pacific Islanders, and American Indians/Alaska Natives. Incidence data for Hispanics are based on NHIA and exclude cases from the Alaska Native Registry.

- Statistic not shown due to fewer than 16 cases during the time period.