

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 18 SEER Geographic Areas by Subtype, 2008-2012

Site	Both Sexes			Males			Females		
	Count	Percent	Rate	Count	Percent	Rate	Count	Percent	Rate
Total	34,431	100.0%	8.0	18,802	100.0%	10.3	15,629	100.0%	6.4
Myelodysplastic Syndromes (MDS)	21,056	100.0%	5.0	11,879	100.0%	6.8	9,177	100.0%	3.7
Refractory anemia (RA), NOS	1,856	8.8%	0.4	968	8.1%	0.6	888	9.7%	0.4
RA with ringed sideroblasts	1,378	6.5%	0.3	782	6.6%	0.4	596	6.5%	0.2
RA with excess blasts (RAEB)	2,871	13.6%	0.7	1,717	14.5%	0.9	1,154	12.6%	0.5
RAEB in transformation	54	0.3%	0.0	34	0.3%	0.0	20	0.2%	0.0
Refractory cytopenia w/multilineage dysplasia	1,482	7.0%	0.4	975	8.2%	0.5	507	5.5%	0.2
Myelodysplastic syndrome with 5q deletion	634	3.0%	0.1	261	2.2%	0.1	373	4.1%	0.2
Therapy-related myelodysplastic syndrome	291	1.4%	0.1	156	1.3%	0.1	135	1.5%	0.1
Myelodysplastic syndrome, NOS	12,490	59.3%	2.9	6,986	58.8%	4.0	5,504	60.0%	2.2
Chronic Myeloproliferative Disorders (CMD)	11,581	100.0%	2.6	5,783	100.0%	2.9	5,798	100.0%	2.4
Polycythemia vera	4,406	38.0%	1.0	2,461	42.6%	1.2	1,945	33.5%	0.8
Chronic myeloproliferative disease, NOS	1,011	8.7%	0.2	547	9.5%	0.3	464	8.0%	0.2
Myelosclerosis with myeloid metaplasia	1,447	12.5%	0.3	878	15.2%	0.5	569	9.8%	0.2
Essential thrombocythemia	4,539	39.2%	1.0	1,781	30.8%	0.9	2,758	47.6%	1.2
Chronic neutrophilic leukemia	30	0.3%	0.0	23	0.4%	0.0	-	-	-
Hypereosinophilic syndrome	148	1.3%	0.0	93	1.6%	0.0	55	0.9%	0.0
Chronic Myelomonocytic Leukemia (CMML)	1,794	100.0%	0.4	1,140	100.0%	0.6	654	100.0%	0.3

Source: SEER 18 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 and Georgia excluding ATL/RG).

^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 18 SEER Geographic Areas by Age and Race, 2008-2012

Site	Both Sexes		Males		Females	
	Rate	Count	Rate	Count	Rate	Count
Myelodysplastic Syndromes (MDS)						
By age						
Ages <40	0.2	377	0.2	189	0.2	188
Ages 40-49	0.8	483	0.8	238	0.8	245
Ages 50-59	2.5	1,462	2.8	788	2.2	674
Ages 60-69	9.7	3,619	11.8	2,093	7.7	1,526
Ages 70-79	30.4	6,435	40.7	3,793	22.4	2,642
Ages 80+	59.1	8,680	89.6	4,778	41.6	3,902
By race						
All Races	5.0	21,056	6.8	11,879	3.7	9,177
White	5.1	17,771	7.0	10,171	3.8	7,600
Black	4.1	1,575	5.2	758	3.5	817
Asian/Pacific Islander	3.8	1,384	5.2	782	2.8	602
American Indian/Alaska Native ^b	3.3	70	3.7	37	2.8	33
Hispanic ^c	3.6	1,624	4.5	841	3.0	783
Chronic Myeloproliferative Disorders (CMD)						
By age						
Ages <40	0.4	811	0.3	397	0.4	414
Ages 40-49	1.7	1,055	1.8	551	1.6	504
Ages 50-59	3.2	1,863	3.7	1,055	2.7	808
Ages 60-69	7.0	2,646	7.9	1,413	6.2	1,233
Ages 70-79	12.6	2,684	14.0	1,320	11.5	1,364
Ages 80+	17.2	2,522	19.6	1,047	15.9	1,475
By race						
All Races	2.6	11,581	2.9	5,783	2.4	5,798
White	2.7	9,276	2.9	4,647	2.4	4,629
Black	2.7	1,174	2.9	548	2.5	626
Asian/Pacific Islander	1.9	797	2.3	409	1.7	388
American Indian/Alaska Native ^b	1.8	47	2.3	25	1.5	22
Hispanic ^c	1.7	926	2.0	475	1.5	451
Chronic Myelomonocytic Leukemia (CMML)						
By age						
Ages <40	0.0	21	0.0	16	-	-
Ages 40-49	0.1	40	0.1	20	0.1	20
Ages 50-59	0.2	121	0.3	95	0.1	26
Ages 60-69	1.0	354	1.3	226	0.7	128
Ages 70-79	2.9	612	4.4	413	1.7	199
Ages 80+	4.4	646	6.9	370	3.0	276
By race						
All Races	0.4	1,794	0.6	1,140	0.3	654
White	0.4	1,542	0.7	983	0.3	559
Black	0.3	114	0.4	62	0.2	52
Asian/Pacific Islander	0.3	112	0.5	77	0.2	35
American Indian/Alaska Native ^b	-	-	-	-	-	-
Hispanic ^c	0.3	137	0.5	87	0.2	50

Source: SEER 18 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 and Georgia excluding ATL/RG).

^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 CHSDA (Contract Health Service Delivery Area) 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.