

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, 2009-2013

Site	Both Sexes			Males			Females		
	Count	Percent	Rate	Count	Percent	Rate	Count	Percent	Rate
Total	34,645	100.0%	7.9	18,985	100.0%	10.2	15,660	100.0%	6.3
Myelodysplastic Syndromes (MDS)	21,338	100.0%	4.9	12,098	100.0%	6.7	9,240	100.0%	3.7
Refractory anemia (RA), NOS	1,707	8.0%	0.4	890	7.4%	0.5	817	8.8%	0.3
RA with ringed sideroblasts	1,374	6.4%	0.3	769	6.4%	0.4	605	6.5%	0.2
RA with excess blasts (RAEB)	3,057	14.3%	0.7	1,844	15.2%	1.0	1,213	13.1%	0.5
RAEB in transformation	24	0.1%	0.0	-	-	-	-	-	-
Refractory cytopenia w/multilineage dysplasia	1,568	7.3%	0.4	1,036	8.6%	0.6	532	5.8%	0.2
Myelodysplastic syndrome with 5q deletion	689	3.2%	0.2	286	2.4%	0.2	403	4.4%	0.2
Therapy-related myelodysplastic syndrome	85	0.4%	0.0	42	0.3%	0.0	43	0.5%	0.0
Myelodysplastic syndrome, NOS	12,834	60.1%	3.0	7,218	59.7%	4.0	5,616	60.8%	2.2
Chronic Myeloproliferative Disorders (CMD)	11,409	100.0%	2.5	5,676	100.0%	2.8	5,733	100.0%	2.4
Polycythemia vera	4,701	41.2%	1.0	2,659	46.8%	1.3	2,042	35.6%	0.8
Chronic myeloproliferative disease, NOS	288	2.5%	0.1	141	2.5%	0.1	147	2.6%	0.1
Myelosclerosis with myeloid metaplasia	1,520	13.3%	0.3	910	16.0%	0.5	610	10.6%	0.2
Essential thrombocythemia	4,747	41.6%	1.1	1,869	32.9%	0.9	2,878	50.2%	1.2
Chronic neutrophilic leukemia	31	0.3%	0.0	21	0.4%	0.0	-	-	-
Hypereosinophilic syndrome	122	1.1%	0.0	76	1.3%	0.0	46	0.8%	0.0
Chronic Myelomonocytic Leukemia (CMML)	1,898	100.0%	0.4	1,211	100.0%	0.7	687	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, 2009-2013

Site	Both Sexes		Males		Females	
	Rate	Count	Rate	Count	Rate	Count
Myelodysplastic Syndromes (MDS)						
By age						
Ages <40	0.1	335	0.1	164	0.1	171
Ages 40-49	0.7	459	0.8	233	0.7	226
Ages 50-59	2.4	1,406	2.7	781	2.0	625
Ages 60-69	9.3	3,653	11.5	2,131	7.4	1,522
Ages 70-79	30.2	6,539	40.3	3,861	22.2	2,678
Ages 80+	59.8	8,946	90.0	4,928	42.3	4,018
By race						
All Races	4.9	21,338	6.7	12,098	3.7	9,240
White	5.1	17,978	7.0	10,351	3.8	7,627
Black	4.1	1,617	5.3	806	3.4	811
Asian/Pacific Islander	3.7	1,420	4.8	777	2.8	643
American Indian/Alaska Native ^b	3.4	76	3.6	38	3.2	38
Hispanic ^c	3.5	1,644	4.4	866	2.9	778
Chronic Myeloproliferative Disorders (CMD)						
By age						
Ages <40	0.3	791	0.3	370	0.4	421
Ages 40-49	1.6	1,015	1.8	536	1.5	479
Ages 50-59	3.3	1,927	3.8	1,095	2.8	832
Ages 60-69	6.8	2,707	7.7	1,442	6.1	1,265
Ages 70-79	12.0	2,605	12.9	1,253	11.2	1,352
Ages 80+	15.9	2,364	17.9	980	14.8	1,384
By race						
All Races	2.5	11,409	2.8	5,676	2.4	5,733
White	2.6	9,160	2.8	4,578	2.4	4,582
Black	2.5	1,157	2.8	557	2.3	600
Asian/Pacific Islander	1.8	777	2.0	384	1.6	393
American Indian/Alaska Native ^b	1.7	46	2.0	24	1.5	22
Hispanic ^c	1.6	885	1.8	446	1.4	439
Chronic Myelomonocytic Leukemia (CMML)						
By age						
Ages <40	0.0	19	-	-	-	-
Ages 40-49	0.1	36	0.1	21	-	-
Ages 50-59	0.2	125	0.3	93	0.1	32
Ages 60-69	1.0	384	1.4	250	0.7	134
Ages 70-79	3.0	643	4.5	432	1.8	211
Ages 80+	4.7	691	7.3	402	3.1	289
By race						
All Races	0.4	1,898	0.7	1,211	0.3	687
White	0.5	1,643	0.7	1,059	0.3	584
Black	0.3	122	0.4	67	0.2	55
Asian/Pacific Islander	0.3	111	0.4	70	0.2	41
American Indian/Alaska Native ^b	-	-	-	-	-	-
Hispanic ^c	0.3	145	0.5	93	0.2	52

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.