

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<sup>a</sup> for the 18 SEER Geographic Areas by Subtype, 2011-2015

Site	Both Sexes			Males			Females		
	Count	Percent	Rate	Count	Percent	Rate	Count	Percent	Rate
Total	35,678	100.0%	7.8	19,550	100.0%	9.9	16,128	100.0%	6.3
Myelodysplastic Syndromes (MDS)	20,934	100.0%	4.6	12,051	100.0%	6.3	8,883	100.0%	3.4
Refractory anemia (RA), NOS	1,361	6.5%	0.3	756	6.3%	0.4	605	6.8%	0.2
RA with ringed sideroblasts	1,283	6.1%	0.3	717	5.9%	0.4	566	6.4%	0.2
RA with excess blasts (RAEB)	3,364	16.1%	0.7	2,057	17.1%	1.1	1,307	14.7%	0.5
RAEB in transformation	-	-	-	-	-	-	-	-	-
Refractory cytopenia w/multilineage dysplasia	1,638	7.8%	0.4	1,099	9.1%	0.6	539	6.1%	0.2
Myelodysplastic syndrome with 5q deletion	739	3.5%	0.2	282	2.3%	0.1	457	5.1%	0.2
Therapy-related myelodysplastic syndrome	-	-	-	-	-	-	-	-	-
Myelodysplastic syndrome, NOS	12,549	59.9%	2.8	7,140	59.2%	3.8	5,409	60.9%	2.0
Chronic Myeloproliferative Disorders (CMD)	12,702	100.0%	2.7	6,202	100.0%	2.9	6,500	100.0%	2.6
Polycythemia vera	5,332	42.0%	1.1	2,985	48.1%	1.4	2,347	36.1%	0.9
Chronic myeloproliferative disease, NOS	-	-	-	-	-	-	-	-	-
Myelosclerosis with myeloid metaplasia	1,641	12.9%	0.4	974	15.7%	0.5	667	10.3%	0.3
Essential thrombocythemia	5,557	43.7%	1.2	2,141	34.5%	1.0	3,416	52.6%	1.4
Chronic neutrophilic leukemia	40	0.3%	0.0	22	0.4%	0.0	18	0.3%	0.0
Hypereosinophilic syndrome	132	1.0%	0.0	80	1.3%	0.0	52	0.8%	0.0
Chronic Myelomonocytic Leukemia (CMML)	2,042	100.0%	0.5	1,297	100.0%	0.7	745	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).

<sup>a</sup> 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 LeukemiaAge-Adjusted Incidence Rates<sup>a</sup> for the 18 SEER Geographic Areas by Age and Race, 2011-2015

Site	Both Sexes		Males		Females	
	Rate	Count	Rate	Count	Rate	Count
Myelodysplastic Syndromes (MDS)						
By age						
Ages <40	0.1	315	0.1	152	0.1	163
Ages 40-49	0.7	416	0.7	218	0.6	198
Ages 50-59	2.2	1,349	2.5	759	1.9	590
Ages 60-69	8.6	3,634	10.7	2,158	6.6	1,476
Ages 70-79	28.3	6,469	38.1	3,888	20.4	2,581
Ages 80+	56.8	8,751	85.1	4,876	39.9	3,875
By race						
All Races	4.6	20,934	6.3	12,051	3.4	8,883
White	4.8	17,557	6.6	10,271	3.5	7,286
Black	3.9	1,639	5.0	826	3.2	813
Asian/Pacific Islander	3.2	1,388	4.3	770	2.5	618
American Indian/Alaska Native <sup>b</sup>	3.4	81	4.4	48	2.6	33
Hispanic <sup>c</sup>	3.2	1,663	4.1	896	2.6	767
Chronic Myeloproliferative Disorders (CMD)						
By age						
Ages <40	0.4	877	0.4	411	0.4	466
Ages 40-49	1.9	1,133	1.9	582	1.8	551
Ages 50-59	3.5	2,148	4.1	1,208	3.0	940
Ages 60-69	7.4	3,150	8.0	1,628	6.8	1,522
Ages 70-79	12.6	2,915	13.2	1,370	12.1	1,545
Ages 80+	16.2	2,479	17.5	1,003	15.5	1,476
By race						
All Races	2.7	12,702	2.9	6,202	2.6	6,500
White	2.8	10,250	3.0	5,058	2.6	5,192
Black	2.5	1,227	2.7	575	2.4	652
Asian/Pacific Islander	1.8	840	1.9	392	1.7	448
American Indian/Alaska Native <sup>b</sup>	1.6	49	1.8	27	1.4	22
Hispanic <sup>c</sup>	1.6	1,014	1.8	511	1.5	503
Chronic Myelomonocytic Leukemia (CMML)						
By age						
Ages <40	0.0	21	-	-	-	-
Ages 40-49	0.1	35	0.1	18	0.1	17
Ages 50-59	0.2	124	0.3	83	0.1	41
Ages 60-69	1.0	435	1.5	299	0.6	136
Ages 70-79	3.1	705	4.5	464	1.9	241
Ages 80+	4.8	722	7.4	422	3.2	300
By race						
All Races	0.5	2,042	0.7	1,297	0.3	745
White	0.5	1,748	0.7	1,128	0.3	620
Black	0.3	139	0.5	76	0.3	63
Asian/Pacific Islander	0.3	127	0.4	74	0.2	53
American Indian/Alaska Native <sup>b</sup>	-	-	-	-	-	-
Hispanic <sup>c</sup>	0.3	144	0.4	93	0.2	51

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).

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

<sup>b</sup> Incidence data for American Indian/Alaska Native are based on the CHSDA (Contract Health Service Delivery Area) counties.

<sup>c</sup> 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.