Section XXX
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 XXX-1

**MYELODYSPLASTIC SYNDROMES, CHRONIC MYELOPROLIFERATIVE DISORDERS, AND CHRONIC MYELOMONOCYTIC LEUKEMIA**

Counts, Percents and Age-Adjusted Incidence Rates* for the 17 SEER Geographic Areas by Subtype, 2001-2004

<table>
<thead>
<tr>
<th>Site</th>
<th>Both Sexes</th>
<th></th>
<th></th>
<th>Males</th>
<th></th>
<th></th>
<th>Females</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Count</td>
<td>Percent</td>
<td>Rate</td>
<td>Count</td>
<td>Percent</td>
<td>Rate</td>
<td>Count</td>
<td>Percent</td>
<td>Rate</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>17410</td>
<td>100.0%</td>
<td>6.1</td>
<td>9421</td>
<td>100.0%</td>
<td>8.0</td>
<td>7989</td>
<td>100.0%</td>
<td>4.9</td>
</tr>
<tr>
<td><strong>Myelodysplastic syndromes (MDS)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Myelodysplastic anemia (RA), NOS</td>
<td>10268</td>
<td>100.0%</td>
<td>3.6</td>
<td>5564</td>
<td>100.0%</td>
<td>4.9</td>
<td>4704</td>
<td>100.0%</td>
<td>2.9</td>
</tr>
<tr>
<td>RA with ringed sideroblasts</td>
<td>1169</td>
<td>11.4%</td>
<td>0.4</td>
<td>627</td>
<td>11.3%</td>
<td>0.6</td>
<td>542</td>
<td>11.5%</td>
<td>0.3</td>
</tr>
<tr>
<td>RA with excess blasts (RAEB)</td>
<td>1382</td>
<td>13.5%</td>
<td>0.5</td>
<td>833</td>
<td>15.0%</td>
<td>0.7</td>
<td>549</td>
<td>11.7%</td>
<td>0.3</td>
</tr>
<tr>
<td>RAEB in transformation</td>
<td>151</td>
<td>1.5%</td>
<td>0.1</td>
<td>85</td>
<td>1.5%</td>
<td>0.1</td>
<td>66</td>
<td>1.4%</td>
<td>0.0</td>
</tr>
<tr>
<td>Refractory anemia w/multilineage dysplasia</td>
<td>409</td>
<td>4.0%</td>
<td>0.1</td>
<td>243</td>
<td>4.4%</td>
<td>0.2</td>
<td>166</td>
<td>3.5%</td>
<td>0.1</td>
</tr>
<tr>
<td>Myelodysplastic syndrome with 5q deletion</td>
<td>169</td>
<td>1.6%</td>
<td>0.1</td>
<td>70</td>
<td>1.3%</td>
<td>0.1</td>
<td>99</td>
<td>2.1%</td>
<td>0.1</td>
</tr>
<tr>
<td>Therapy-related myelodysplastic syndrome</td>
<td>172</td>
<td>1.7%</td>
<td>0.1</td>
<td>78</td>
<td>1.4%</td>
<td>0.1</td>
<td>94</td>
<td>2.0%</td>
<td>0.1</td>
</tr>
<tr>
<td>Myelodysplastic syndrome, NOS</td>
<td>5159</td>
<td>50.2%</td>
<td>1.8</td>
<td>2789</td>
<td>50.1%</td>
<td>2.5</td>
<td>2370</td>
<td>50.4%</td>
<td>1.4</td>
</tr>
<tr>
<td><strong>Chronic myeloproliferative disorders (CMD)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chronic myeloproliferative disease, NOS</td>
<td>1185</td>
<td>19.4%</td>
<td>0.4</td>
<td>642</td>
<td>19.8%</td>
<td>0.5</td>
<td>543</td>
<td>18.8%</td>
<td>0.3</td>
</tr>
<tr>
<td>Myelosclerosis with myeloid metaplasia</td>
<td>694</td>
<td>11.3%</td>
<td>0.2</td>
<td>402</td>
<td>12.4%</td>
<td>0.3</td>
<td>292</td>
<td>10.1%</td>
<td>0.2</td>
</tr>
<tr>
<td>Essential thrombocythemia</td>
<td>1568</td>
<td>25.6%</td>
<td>0.5</td>
<td>627</td>
<td>19.4%</td>
<td>0.5</td>
<td>941</td>
<td>32.6%</td>
<td>0.6</td>
</tr>
<tr>
<td>Chronic neutrophilic leukemia</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Hypereosinophilic syndrome</td>
<td>109</td>
<td>1.8%</td>
<td>0.0</td>
<td>62</td>
<td>1.9%</td>
<td>0.0</td>
<td>47</td>
<td>1.6%</td>
<td>0.0</td>
</tr>
<tr>
<td><strong>Chronic myelomonocytic leukemia (CMML)</strong></td>
<td>1019</td>
<td>100.0%</td>
<td>0.4</td>
<td>617</td>
<td>100.0%</td>
<td>0.5</td>
<td>402</td>
<td>100.0%</td>
<td>0.2</td>
</tr>
</tbody>
</table>

Source: SEER 17 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 and New Jersey).

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

* Rates are age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130).
## Table XXX-2

**MYELODYSPLASTIC SYNDROMES, CHRONIC MYELOPROLIFERATIVE DISORDERS, AND CHRONIC MYELOMONOCYTIC LEUKEMIA**

Age-Adjusted Incidence Rates\(^a\) for the 17 SEER Geographic Areas by Age and Race, 2001-2004

<table>
<thead>
<tr>
<th>Site</th>
<th>Rate</th>
<th>Count</th>
<th>Rate</th>
<th>Count</th>
<th>Rate</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Both Sexes</td>
<td></td>
<td>Males</td>
<td></td>
<td>Females</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Rate</td>
<td>Count</td>
<td>Rate</td>
<td>Count</td>
<td>Rate</td>
<td>Count</td>
</tr>
</tbody>
</table>

### Myelodysplastic syndromes (MDS)

#### By age

- **<40**
  - White: 0.2, 272
  - Black: 0.8, 360
  - Asian/Pacific Islander: 2.1, 748
  - Hispanic\(^c\): 39.3, 3831

- **40-49**
  - White: 0.8, 360
  - Black: 2.1, 748
  - Asian/Pacific Islander: 7.8, 1611
  - Hispanic\(^c\): 39.3, 3831

- **50-59**
  - White: 2.1, 748
  - Black: 7.8, 1611
  - Asian/Pacific Islander: 22.5, 3446
  - Hispanic\(^c\): 57.7, 1966

- **60-69**
  - White: 7.8, 1611
  - Black: 22.5, 3446
  - Asian/Pacific Islander: 39.3, 3831

- **70-79**
  - White: 39.3, 3831
  - Black: 57.7, 1966
  - Asian/Pacific Islander: 1.3, 616

- **80+**
  - White: 39.3, 3831
  - Black: 57.7, 1966
  - Asian/Pacific Islander: 1.3, 616

#### By race

- **All Races**
  - White: 3.6, 10268
  - Black: 3.7, 8741
  - Asian/Pacific Islander: 2.8, 579
  - Hispanic\(^c\): 2.8, 730

### Chronic myeloproliferative disorders (CMD)

#### By age

- **<40**
  - White: 0.2, 417
  - Black: 1.3, 616
  - Asian/Pacific Islander: 2.6, 918
  - Hispanic\(^c\): 2.8, 730

- **40-49**
  - White: 0.8, 360
  - Black: 2.6, 918
  - Asian/Pacific Islander: 7.8, 1611
  - Hispanic\(^c\): 7.4, 3446

- **50-59**
  - White: 2.1, 748
  - Black: 7.8, 1611
  - Asian/Pacific Islander: 22.5, 3446
  - Hispanic\(^c\): 7.4, 3446

- **60-69**
  - White: 2.1, 748
  - Black: 7.8, 1611
  - Asian/Pacific Islander: 39.3, 3831
  - Hispanic\(^c\): 7.4, 3446

- **70-79**
  - White: 7.8, 1611
  - Black: 22.5, 3446
  - Asian/Pacific Islander: 39.3, 3831

- **80+**
  - White: 39.3, 3831
  - Black: 57.7, 1966
  - Asian/Pacific Islander: 1.3, 616

#### By race

- **All Races**
  - White: 2.1, 6123
  - Black: 2.1, 5008
  - Asian/Pacific Islander: 1.5, 360
  - Hispanic\(^c\): 1.5, 470

### Chronic myelomonocytic leukemia (CMML)

#### By age

- **<40**
  - White: 0.2, 53
  - Black: 0.8, 173
  - Hispanic\(^c\): 0.2, 53

- **40-49**
  - White: 0.2, 53
  - Black: 0.8, 173
  - Hispanic\(^c\): 0.2, 53

- **50-59**
  - White: 0.2, 53
  - Black: 0.8, 173
  - Hispanic\(^c\): 0.2, 53

- **60-69**
  - White: 0.2, 53
  - Black: 0.8, 173
  - Hispanic\(^c\): 0.2, 53

- **70-79**
  - White: 0.2, 53
  - Black: 0.8, 173
  - Hispanic\(^c\): 0.2, 53

- **80+**
  - White: 0.2, 53
  - Black: 0.8, 173
  - Hispanic\(^c\): 0.2, 53

#### By race

- **All Races**
  - White: 0.2, 53
  - Black: 0.8, 173
  - Hispanic\(^c\): 0.2, 53

Source: SEER 17 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, Louisians and New Jersey).\(^a\)

- Statistic not shown due to fewer than 16 cases during the time period.
- Rates are age-adjusted to the 2000 US Std Population (19 age groups – Census P25-1130).
- Incidence data for American Indian/Alaska Native are based on the CHSDA(Contract Health Service Delivery Area) counties.
- 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 and Kentucky.