**Supplemental Materials**

**Supplemental Materials Table 1. Search Term and Primary Sites**

**SEER variable** “AYA Site Recode/WHO 2008”, key term: “4.2 chondrosarcoma”.

**Tumor Primary Location included:**

C40.0-Long bones: upper limb, scapula, and associated joints

C40.1-Short bones of upper limb and associated joints

C40.2-Long bones of lower limb and associated joints

C40.3-Short bones of lower limb and associated joints

C40.8-Overlap of bones, joints, and art. cartilage of limbs

C40.9-Bone of limb, NOS”, “C41.2-Vertebral column

C41.3-Rib, sternum, clavicle and associated joints

C41.4-Pelvic bones, sacrum, coccyx and associated joints

C41.8-Overlap bones, joints, and art. cartilage

C41.9-Bone, NOS

C47.1-Periph nerves & autonomic nerv sys: upr limb, shoulder

C49.1-Conn, subcutaneous, other soft tis: upr limb, shoulder

C49.2-Conn, subcutaneous, other soft tis: lower limb, hip

C49.6-Conn, subcutaneous, other soft tis: trunk, NOS

C76.3-Pelvis, NOS

**Supplementary Materials Table 2. Association between Receipt of Surgery and Presence of Distant Metastases at Initial Diagnosis of Chondrosarcoma.**

A) Among whole population.

|  |  |  |
| --- | --- | --- |
|  |  | **Distant metastasis**  |
| **Surgery**  |  | No | Yes | **Total** |
| No | 221 | 82 | 303 |
| Yes | 1984 | 94 | 2078 |
| Missing | 3 | 0 | 3 |
| **Total**  | 2208 | 176 | 2384 |

Fisher’s exact test: p<0.0001

Missing distant metastasis information: surgery -: 5, surgery+:10

B) Among patients with lymph node involvement at initial diagnosis.

|  |  |  |
| --- | --- | --- |
|  |  | **Distant metastasis**  |
| **Surgery**  |  | No | Yes | **Total** |
| No | 5 | 9 | 14 |
| Yes | 14 | 4 | 18 |
| **Total**  | 19 | 13 | 32 |

Fisher’s exact test: p=0.029

**Supplementary Materials Table 3. Association between Receipt of Lymph Node Surgery and Presence of Distant Metastases at Initial Diagnosis of Chondrosarcoma.**

A) Among whole population.

|  |  |  |  |
| --- | --- | --- | --- |
|  |  |  | **Distant metastasis**  |
| **LN Surgery**  |  | No | Yes | Missing | **Total** |
| No | 2090 | 170 | 14 | 2274 |
| Yes | 118 | 6 | 1 | 125 |
| **Total**  | 2208 | 176 | 15 | 2399 |

Fisher’s exact test: p=0.375

B) Among patients with lymph node involvement at initial diagnosis.

|  |  |  |
| --- | --- | --- |
|  |  | **Distant metastasis**  |
| **LN Surgery**  |  | No | Yes | **Total** |
| No | 6 | 11 | 17 |
| Yes | 13 | 2 | 15 |
| **Total**  | 19 | 13 | 32 |

Fisher’s exact test: p=0.005

**Supplementary Materials Table 4. Association between Receipt of Chemotherapy and of Radiation Therapy.**

A) Among cases who had distant metastasis at diagnosis.

|  |  |  |
| --- | --- | --- |
|  |  | **Radiation** |
| **Chemotherapy**  |  | No/Unknown | Yes | **Total** |
| No/Unknown | 71 | 30 | 101 |
| Yes | 49 | 26 | 75 |
| **Total** | 120 | 56 | 176 |

Fisher’s exact test: p=0.516

B) Among patients with lymph node involvement at initial diagnosis.

|  |  |  |
| --- | --- | --- |
|  |  | **Radiation** |
| **Chemotherapy**  |  | No/Unknown | Yes | **Total** |
| No/Unknown | 15 | 7 | 22 |
| Yes | 6 | 4 | 10 |
| **Total** | 21 | 11 | 32 |

Fisher’s exact test: p=0.703

**Supplementary Materials Table 5. Histologic Subtypes of Patients Receiving Chemotherapy.**

|  |  |  |
| --- | --- | --- |
| **Histologic Subtype** | **Nodal status** |  |
| Negative | Positive |  |
| Chondrosarcoma | 78 | 3 | 81 |
| Juxtacortical chondrosarcoma | 1 | 0 | 1 |
| Myxoid chondrosarcoma  | 32 | 4 | 36 |
| Mesenchymal chondrosarcoma  | 30 | 1 | 31 |
| Dedifferentiated Chondrosarcoma  | 68 | 2 | 70 |
| **Total** | 209 | 10 | 219\* |

\*Total number of patients treated with chemotherapy out of entire study population (n=2399).