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| **Supplemental Table S1.** Cox proportional hazards models relating granulocyte colony-stimulating factors (G-CSF) to risk of myelodysplastic syndrome and acute myeloid leukemia among Medicare beneficiaries diagnosed with Diffuse Large B-Cell Lymphoma (DLBCL) from the SEER-Medicare linked database between 2001 and 2011 by primary treatment received | | | | | | | | | |
|  | All DLBCL Patients | | | DLBCL Patients Receiving  Any Chemotherapy and/or Immunotherapy | | | DLBCL Patients Receiving  Rituximab + Chemotherapy | | |
|  | HR | (95% CI) | *P* | HR | (95% CI) | *P* | HR | (95% CI) | *P* |
| None | 1.00 | Reference |  | 1.00 | Reference |  | 1.00 | Reference |  |
| Any G-CSF | 1.34 | (0.90, 2.01) | 0.15 | 0.96 | (0.65, 1.40) | 0.82 | 1.27 | (0.78, 2.11) | 0.34 |
|  |  |  |  |  |  |  |  |  |  |
| 1 to 4 Doses | 1.20 | (0.76, 1.90) | 0.44 | 0.87 | (0.57, 1.34) | 0.54 | 1.17 | (0.64, 2.14) | 0.61 |
| 5 to 9 Doses | 1.27 | (0.78, 2.06) | 0.35 | 0.92 | (0.57, 1.51) | 0.75 | 1.19 | (0.69, 2.05) | 0.52 |
| 10+ Doses | 1.72 | (1.06, 2.81) | 0.03 | 1.16 | (0.72, 1.87) | 0.55 | 1.57 | (0.88, 2.81) | 0.13 |
| *P*-trend: |  | 0.20 |  |  | 0.56 |  |  | 0.34 |  |
| \* Models are adjusted for age, gender, race/ethnicity, NCI Comorbidity Index score at diagnosis, year of diagnosis, Ann Arbor stage, and chemotherapy and/or immunotherapy received. | | | | | | | | | |

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| **Supplemental Table S2.** Cox proportional hazards models relating granulocyte colony-stimulating factors (G-CSF) to risk of myelodysplastic syndrome and acute myeloid leukemia among Medicare beneficiaries diagnosed with Follicular Lymphoma (FL) from the SEER-Medicare linked database between 2001 and 2011 by primary treatment received | | | | | | | | | |
|  | All FL Patients | | | FL Patients Receiving  Any Chemotherapy and/or Immunotherapy | | | FL Patients Receiving  Rituximab + Chemotherapy | | |
|  | HR | (95% CI) | *P* | HR | (95% CI) | *P* | HR | (95% CI) | *P* |
| None | 1.00 | Reference |  | 1.00 | Reference |  | 1.00 | Reference |  |
| Any G-CSF | 1.50 | (0.78, 2.90) | 0.23 | 1.41 | (0.80, 2.50) | 0.24 | 1.52 | (0.72, 3.19) | 0.28 |
|  |  |  |  |  |  |  |  |  |  |
| 1 to 4 Doses | 1.30 | (0.58, 2.89) | 0.52 | 1.17 | (0.57, 2.43) | 0.67 | 1.31 | (0.50, 3.42) | 0.58 |
| 5 to 9 Doses | 1.32 | (0.57, 3.07) | 0.52 | 1.19 | (0.52, 2.73) | 0.67 | 1.33 | (0.55, 3.19) | 0.53 |
| 10+ Doses | 2.31 | (0.98, 5.43) | 0.06 | 2.23 | (1.04, 4.77) | 0.04 | 2.13 | (0.85, 5.32) | 0.11 |
| *P*-trend: |  | 0.02 |  |  | 0.01 |  |  | 0.10 |  |
| \* Models are adjusted for age, gender, race/ethnicity, NCI Comorbidity Index score at diagnosis, year of diagnosis, Ann Arbor stage, and chemotherapy and/or immunotherapy received. | | | | | | | | | |

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| **Supplemental Table S3.** Cox proportional hazards models relating granulocyte colony-stimulating factors (G-CSF) to risk of myelodysplastic syndrome and acute myeloid leukemia among Medicare beneficiaries diagnosed with Non-Hodgkin lymphoma (NHL) from the SEER-Medicare linked database by primary treatment received and diagnosis year | | | | | | | | | |
|  | All NHL Patients | | | Patients Receiving  Any Chemotherapy and/or Immunotherapy | | | Patients Receiving  Rituximab + Chemotherapy | | |
|  | HR | (95% CI) | *P* | HR | (95% CI) | *P* | HR | (95% CI) | *P* |
| ***2001-2004*** |  |  |  |  |  |  |  |  |  |
| None | 1.00 | Reference |  | 1.00 | Reference |  | 1.00 | Reference |  |
| Any G-CSF | 1.30 | (0.83, 2.02) | 0.25 | 1.47 | (0.96, 2.26) | 0.08 | 1.19 | (0.71, 1.99) | 0.52 |
|  |  |  |  |  |  |  |  |  |  |
| 1 to 4 Doses | 1.10 | (0.59, 2.02) | 0.77 | 1.26 | (0.69, 2.32) | 0.45 | 0.99 | (0.48, 2.05) | 0.98 |
| 5 to 9 Doses | 1.23 | (0.66, 2.28) | 0.52 | 1.39 | (0.76, 2.56) | 0.29 | 1.24 | (0.64, 2.43) | 0.52 |
| 10+ Doses | 1.56 | (0.91, 2.70) | 0.11 | 1.74 | (1.02, 2.98) | 0.04 | 1.32 | (0.69, 2.55) | 0.41 |
| *P*-trend: |  | 0.21 |  |  | 0.14 |  |  | 0.51 |  |
|  |  |  |  |  |  |  |  |  |  |
| ***2005-2008*** |  |  |  |  |  |  |  |  |  |
| None | 1.00 | Reference |  | 1.00 | Reference |  | 1.00 | Reference |  |
| Any G-CSF | 1.36 | (0.93, 1.99) | 0.11 | 1.07 | (0.76, 1.51) | 0.69 | 1.42 | (0.84, 2.42) | 0.19 |
|  |  |  |  |  |  |  |  |  |  |
| 1 to 4 Doses | 1.19 | (0.76, 1.86) | 0.46 | 0.90 | (0.60, 1.35) | 0.62 | 1.23 | (0.69, 2.19) | 0.48 |
| 5 to 9 Doses | 1.20 | (0.75, 1.92) | 0.44 | 0.94 | (0.59, 1.50) | 0.80 | 1.33 | (0.70, 2.50) | 0.38 |
| 10+ Doses | 2.18 | (1.34, 3.53) | <0.01 | 1.72 | (1.11, 2.67) | 0.02 | 2.07 | (1.11, 3.85) | 0.02 |
| *P*-trend: |  | <0.01 |  |  | <0.01 |  |  | <0.01 |  |
|  |  |  |  |  |  |  |  |  |  |
| ***2009-2011*** |  |  |  |  |  |  |  |  |  |
| None | 1.00 | Reference |  | 1.00 | Reference |  | 1.00 | Reference |  |
| Any G-CSF | 1.34 | (0.89, 2.02) | 0.17 | 0.86 | (0.60, 1.24) | 0.43 | 1.18 | (0.70, 2.01) | 0.53 |
|  |  |  |  |  |  |  |  |  |  |
| 1 to 4 Doses | 1.12 | (0.69, 1.83) | 0.64 | 0.75 | (0.48, 1.16) | 0.20 | 0.99 | (0.55, 1.78) | 0.98 |
| 5 to 9 Doses | 1.28 | (0.78, 2.11) | 0.33 | 0.89 | (0.54, 1.45) | 0.63 | 1.21 | (0.64, 2.30) | 0.55 |
| 10+ Doses | 2.01 | (1.18, 3.43) | 0.01 | 1.15 | (0.67, 1.97) | 0.61 | 1.72 | (0.90, 3.31) | 0.10 |
| *P*-trend: |  | 0.08 |  |  | 0.94 |  |  | 0.38 |  |
| \* Models are adjusted for age, gender, race/ethnicity, NCI Comorbidity Index score at diagnosis, year of diagnosis, non-Hodgkin lymphoma subtype, Ann Arbor stage, and chemotherapy and/or immunotherapy received. | | | | | | | | | |

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| **Supplemental Table 4.** Cox proportional hazards models relating granulocyte colony-stimulating factors (G-CSF) to risk of myelodysplastic syndrome and acute myeloid leukemia among Medicare beneficiaries diagnosed with Non-Hodgkin lymphoma (NHL) from the SEER-Medicare linked database between 2001 and 2011 by primary treatment received | | | | | | | | | |
|  | Patients Receiving  Any Chemotherapy and/or Immunotherapy | | | Patients Receiving  Alkylator-including  Chemotherapy | | | Patients Receiving  Anthracycline-including Chemotherapy | | |
|  | HR | (95% CI) | *P* | HR | (95% CI) | *P* | HR | (95% CI) | *P* |
| None | 1.00 | Reference |  | 1.00 | Reference |  | 1.00 | Reference |  |
| Any G-CSF | 1.07 | (0.86, 1.32) | 0.56 | 1.21 | (0.90, 1.63) | 0.21 | 1.06 | (0.74, 1.52) | 0.82 |
|  |  |  |  |  |  |  |  |  |  |
| 1 to 4 Doses | 0.90 | (0.69, 1.17) | 0.44 | 1.09 | (0.77, 1.52) | 0.64 | 1.04 | (0.71, 1.60) | 0.89 |
| 5 to 9 Doses | 0.99 | (0.74, 1.33) | 0.94 | 1.17 | (0.80, 1.70) | 0.42 | 1.07 | (0.77, 1.36) | 0.59 |
| 10+ Doses | 1.51 | (1.14, 2.01) | 0.01 | 1.51 | (1.05, 2.18) | 0.03 | 1.39 | (0.98, 2.09) | 0.06 |
| *P*-trend: |  | <0.01 |  |  | 0.04 |  |  | 0.05 |  |
|  |  |  |  |  |  |  |  |  |  |
| ***Filgrastim*** |  |  |  |  |  |  |  |  |  |
| None | 1.00 | Reference |  | 1.00 | Reference |  | 1.00 | Reference |  |
| Any | 1.34 | (1.07, 1.67) | 0.01 | 1.65 | (1.32, 2.06) | <0.01 | 1.95 | (1.56, 2.43) | <0.01 |
|  |  |  |  |  |  |  |  |  |  |
| 1 to 4 Doses | 1.05 | (0.65, 1.70) | 0.84 | 1.30 | (0.80, 2.10) | 0.44 | 1.53 | (0.95, 2.48) | 0.07 |
| 5 to 9 Doses | 1.15 | (0.81, 1.64) | 0.43 | 1.42 | (1.00, 2.02) | 0.05 | 1.68 | (1.18, 2.39) | <0.01 |
| 10+ Doses | 1.67 | (1.25, 2.23) | <0.01 | 2.06 | (1.54, 2.75) | <0.01 | 2.43 | (1.82, 3.25) | <0.01 |
| *P*-trend: |  | <0.01 |  |  | <0.01 |  |  | <0.01 |  |
|  |  |  |  |  |  |  |  |  |  |
| ***Pegfilgrastim*** |  |  |  |  |  |  |  |  |  |
| None | 1.00 | Reference |  | 1.00 | Reference |  | 1.00 | Reference |  |
| Any | 1.00 | (0.81, 1.24) | 0.99 | 1.03 | (0.84, 1.70) | 0.97 | 1.07 | (0.86, 1.75) | 0.86 |
|  |  |  |  |  |  |  |  |  |  |
| 1 to 3 Doses | 0.98 | (0.71, 1.35) | 0.90 | 1.01 | (0.73, 1.40) | 0.99 | 1.05 | (0.76, 1.44) | 0.96 |
| 4 to 5 Doses | 0.99 | (0.72, 1.38) | 0.98 | 1.02 | (0.74, 1.43) | 0.98 | 1.06 | (0.77, 1.47) | 0.94 |
| 6+ Doses | 1.11 | (0.84, 1.45) | 0.45 | 1.15 | (0.87, 1.50) | 0.43 | 1.19 | (0.90, 1.55) | 0.47 |
| *P*-trend: |  | 0.56 |  |  | 0.55 |  |  | 0.56 |  |
| \* Models are adjusted for age, gender, race/ethnicity, NCI Comorbidity Index score at diagnosis, year of diagnosis, non-Hodgkin lymphoma subtype, and Ann Arbor stage. | | | | | | | | | |