**Suppl 6. Subgroup analysis based on cancer type.**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Grade 1-5** | | | | | | **Grade 3-5** | | | | | |
|  | **Anti-PD-1** | **N/I2** | **Anti-PD-L1** | **N/I2** | **Anti-CTLA-4** | **N/I2** | **Anti-PD-1** | **N/I2** | **Anti-PD-L1** | **N/I2** | **Anti-CTLA-4** | **N/I2** |
| **Anemia** |  |  |  |  |  |  |  |  |  |  |  |  |
| **Gastrointestinal cancer** | 1.17 (0.97-1.43) | 2/0% | 1.10 (0.81-1.49) | 1/- | 0.94 (0.68-1.30) | 1/- | 1.79 (0.97-3.32) | 2/39% | 0.65 (0.26-1.61) | 1/- | 0.83 (0.41-1.68) | 1/- |
| **Melanoma** | - |  | 1.31 (0.81-2.10) | 1/- | 0.47 (0.28-0.80) | 1/- | - |  | - |  | 0.34 (0.10-1.19) | 1/- |
| **Myeloma** | 0.88 (0.60-1.28) | 2/0% | - |  | 1.58 (0.82-3.05) | 1/- | 0.44 (0.13-1.48) | 2/0% | - |  | 1.02 (0.25-4.11) | 1/- |
| **NSCLC** | 0.87 (0.68-1.11) | 3/0% | 1.10 (0.94-1.30) | 4/0% | 1.24 (0.96-1.62) | 1/- | 0.75 (0.43-1.29) | 2/0% | 1.35 (0.75-2.42) | 4/0% | 2.14 (1.00-4.60) | 1/- |
| **SCLC** | 0.74 (0.51-1.07) | 1/- | 1.44 (0.96-2.16) | 1/- | 0.80 (0.63-1.34) | 1/- | 0.69 (0.26-1.85) | 1/- | 1.49 (0.25-9.03) | 1/- | 0.55 (0.28-1.10) | 1/- |
| **Ovarian Cancer** | - |  | 1.15 (0.94-1.41) | 2/0% | - |  | - |  | 1.05 (0.75-1.47) | 2/0% | - |  |
| **Breast Cancer** | 1.05 (0.87-1.26) | 2/0% | 1.02 (0.83-1.25) | 3/0% | - |  | 1.22 (0.94-1.57) | 2/0% | 0.50 (0.14-1.87) | 3/0% | - |  |
| **Urothelial Cancer** | 1.12 (0.81-1.54) | 1/- | 1.39 (0.95-2.03) | 2/32% | - |  | 0.76 (0.38-1.53) | 1/- | 1.07 (0.65-1.76) | 2/0% | - |  |
| **Neutropenia** |  |  |  |  |  |  |  |  |  |  |  |  |
| **Gastrointestinal cancer** | 0.96 (0.77-1.21) | 2/0% | 1.07 (0.77-1.48) | 1/- | - |  | 1.52 (0.57-4.09) | 2/18% | 1.66 (0.39-6.99) | 1/- | - |  |
| **Melanoma** | - |  | - |  | - |  | 4.87 (0.23-102.27) | 1/- | 3.68 (0.15-90.76) | 1/- | 0.84 (0.25-2.87) | 2/0% |
| **Myeloma** | 1.52 (1.03-2.25) | 2/0% | - |  | 1.08 (0.56-2.07) | 1/- | - |  | - |  | - |  |
| **NSCLC** | 1.35 (1.00-1.82) | 2/0% | 1.12 (0.93-1.34) | 4/0% | 1.14 (0.85-1.53) | 1/- | 1.62 (0.30-8.67) | 2/18% | 1.50 (0.64-3.53) | 4/0% | 1.80 (0.79-4.11) | 1/- |
| **SCLC** | 1.22 (0.84-1.78) | 1/- | 1.07 (0.71-1.61) | 1/- | 0.79 (0.63-1.00) | 1/- | 1.88 (0.68-5.17) | 1/- | 0.86 (0.31-2.42) | 1/- | 0.74 (0.38-1.46) | 1/- |
| **Ovarian Cancer** | - |  | 1.01 (0.81-1.26) | 2/0% | - |  | - |  | 1.01 (0.77-1.31) | 2/0% | - |  |
| **Breast Cancer** | 1.05 (0.87-1.26) | 2/0% | 1.26 (0.95-1.67) | 3/34% | - |  | 1.03 (0.85-1.26) | 2/0% | 1.25 (0.25-6.36) | 3/0% | - |  |
| **Urothelial Cancer** | 0.92 (0.68-1.25) | 1/- | 1.97 (1.22-3.19) | 1/- | - |  | 0.65 (0.11-3.92) | 1/- | 2.01 (1.12-3.62) | 1/- | - |  |
| **Thrombocytopenia** |  |  |  |  |  |  |  |  |  |  |  |  |
| **Gastrointestinal cancer** | 1.06 (0.84-1.33) | 2/0% | 1.13 (0.72-1.77) | 1/- | 0.17 (0.02-1.38) | 1/- | 1.30 (0.67-2.51) | 2/0% | 2.97 (0.12-73.26) | 1/- | 3.03 (0.12-74.62) | 1/- |
| **Melanoma** | - |  | - |  | - |  | - |  | 0.41 (0.02-10.0) | 1/- | 1.05 (0.04-25.87) | 1/- |
| **Myeloma** | 1.25 (0.75-2.07) | 2/0% | - |  | 2.06 (0.51-8.32) | 1/0 | 0.98 (0.14-7.07) | 1/- | - |  | 2.06 (0.51-8.32) | 1/- |
| **NSCLC** | 1.35 (0.85-2.13) | 1/- | 1.32 (1.00-1.73) | 4/40% | 1.04 (0.74-1.45) | 1/- | 1.31 (0.46-3.72) | 1/- | 2.73 (1.18-6.31) | 4/0% | 0.63 (0.24-1.63) | 1/- |
| **SCLC** | 1.24 (0.81-1.91) | 1/- | 1.10 (0.65-1.85) | 1/- | 0.70 (0.50-0.98) | 1/- | 0.59 (0.14-2.52) | 1/- | 1.24 (0.33-4.70) | 1/- | 0.50 (0.15-1.66) | 1/- |
| **Ovarian Cancer** | - |  | 1.02 (0.78-1.34) | 1/- | - |  | - |  | 1.54 (1.01-2.34) | 2/0% | - |  |
| **Breast Cancer** | - |  | 2.43 (0.88-6.68) | 2/0% | - |  | - |  | 1.52 (0.06-37.53) | 1/- | - |  |
| **Urothelial Cancer** | 0.96 (0.69-1.33) | 1/- | 2.33 (1.38-3.93) | 1/- | - |  | 1.18 (0.50-2.77) | 1/- | 1.11 (0.55-2.26) | 1/- | 2.06 (0.51-8.32) | 1/- |