**Supplementary Table 1.** ICI-Related Phase III RCTs in Previously Untreated Advanced NSCLC without Driver Mutations

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|  | **Keynote-024** | | **Keynote-189** | | **Keynote-407** | | **Checkmate-277** | | | | | | **Checkmate-9LA** | |
| **PD-L1 Status** | ≥50% | | All comers | | All comers | | All comers | | | | | | All comers | |
| PD-L1≥1% | | | PD-L1<1% | | |
| **Randomization Arms** | P | C | P+C | C | P+C | C | N+I | N | C | N+I | N+C | C | N+I+C | C |
| **Age**  **(median)** | 65 | 66 | 65 | 64 | 65 | 65 | 64 | 64 | 64 | 63 | 64 | 64 | 65 | 65 |
| **Total N** | 154 | 151 | 410 | 206 | 278 | 281 | 396 | 396 | 397 | 187 | 177 | 186 | 361 | 358 |
| **ECOG**  0  1  2 | 35%  64%  0% | 35%  65%  0% | 45%  55%  0% | 39%  61%  0% | 26%  74%  0% | 32%  68%  0% | 34%  66%  0% | 36%  64%  0% | 34%  65%  1% | 37%  62%  1% | 33%  66%  1% | 31%  68%  1% | 31%  68%  0% | 31%  68%  0% |
| **Histology**  Squam  Non-Squam | 19%  81% | 18%  82% | N/A  100% | N/A  100% | 100%  N/A | 100%  N/A | 30%  70% | 30%  70% | 29%  71% | 25%  75% | 24%  76% | 25%  75% | 31%  69% | 31%  69% |
| **Brain Metastasis** | 12% | 7% | 18% | 7% | 7% | 9% | 10% | 11% | 10% | 12% | 9% | 6% | 18% | 16% |
| **Follow-Up Duration**  **(median)** | 5-Year Update  59.9 months | | Updated Analysis  23.1 months | | 3-Year Update  40.1 months | | 4-Year Update  Minimum 49.4 months | | | | | | Minimum 8.1 months | |
| **Median Duration of Treatment (months)** | 7.9 | 3.5 | 9.8 | 6.2 | NR | NR | 4.2 | 4.6 | 2.7 | 4.0 | 5.8 | 2.6 | 6.1 | 2.4 |
| **OS**  ITT  Median  (months)  HR (95%CI)  PD-L1 Status  *≥50%*  Median (months)  HR (95%CI)  *1-49%*  Median (months)  HR (95%CI)  *≥1%*  Median (months)  HR (95%CI)  *<1%*  Median (months)  HR (95%CI) | 26.3 vs. 13.4  0.62 (0.48-0.81)  Same as above  -  -  - | | 22.0 vs. 10.7  0.56 (0.45-0.70)  NR vs. 10.1  0.59 (0.39-0.88)  21.9 vs. 12.1  0.62 (0.42-0.92)  NR  17.2 vs. 10.2  0.52 (0.36-0.74) | | 17.2 vs. 11.6  0.71 (0.59-0.86)  NR  0.64 (0.37-1.10)  NR  0.57 (0.36-0.90)  18.7 vs. 12.8  0.68 (0.53-0.87)  15.0 vs. 11.0  0.78 (0.57-1.07) | | 17.1 vs. NR vs. 14.9  NR  21.2 vs. 18.1 vs. 14.0  Dual/chemo 0.70 (0.55-0.90)  Dual/nivo 0.87 (0.68-1.12)  NR  17.1 vs. 15.7 vs. 14.9  Dual/Chemo 0.79 (97.72%CI 0.65-0.96)  Dual/nivo 0.90 (0.76-1.07)  - | | | 17.2 vs. NR vs. 12.2  NR  -  -  -  17.2 vs. 15.2 vs. 12.2  Dual/chemo 0.62 (0.48-0.78)  Dual/nivo+chemo 0.77 (0.60-0.98) | | | 15.6 vs. 10.9  0.66 (0.55-0.80)  18.0 vs. 12.6  0.66 (0.44-0.99)  15.4 vs. 10.4  0.61 (0.44-0.84)  15.8 vs. 10.9  0.64 (0.50-0.82)  16.8 vs. 9.8  0.62 (0.45-0.85) | |
| **PFS**  Median (months)  HR (95%CI) | 7.7 vs. 5.5  0.50 (0.39-0.65) | | 9.0 vs. 4.9  0.48 (0.40-0.58) | | 8.0 vs. 5.1  0.59 (0.49-0.71) | | 5.1 vs. 4.2 vs. 5.6  NR | | | 5.1 vs. 5.6 vs. 4.7  NR | | | 6.7 vs. 5.0  0.68 (0.57-0.82) | |
| **ORR**  ITT  PD-L1≥50%  **CR**  ITT  PD-L1≥50% | 46%  -  4.5%  - | 31%  -  0%  - | 48%  61%  1%  NR | 19%  23%  0.5%  NR | 63%  60%  1%  NR | 39%  33%  2%  NR | 36%  44%  6%  9% | 28%  37%  3%  5% | 30%  35%  2%  2% | 27%  -  2%  - | 38%  -  2%  - | 23%  -  1%  - | 38%  50%  2% | 25%  31%  2% |
| **Time to Response**  **(months)** | 2.2 | 2.2 | 2.2 | 1.4 | 1.4 | 1.4 | 2.0 | 2.7 | 1.6 | 2.8 | 1.7 | 1.5 | 2.6 | 1.5 |
| **Received 2nd Line Therapy** | 52% | 66% | 45% | 54% | NR | NR | 35% | 44% | 54% | 44% | 41% | 53% | 31% | 53% |
| **Toxicity Profile**  All grade  Grade 3/4 | 77%  31% | 90%  53% | 100%  72% | 99%  67% | 99%  75% | 98%  70% | 77%  36% | 66%  19% | 84%  36% | 76%  27% | 92%  56% | 78%  35% | 69%  47% | 87%  38% |

P = pembrolizumab; N = nivolumab; I = ipilimumab; C = chemotherapy (platinum-doublet)

NR = not recorded; ITT = intention to treat; OS = overall survival; PFS = progression-free survival; ORR = objective response rate; CR = complete response