### Figure S2: Forest plot for haematological adverse effects.

| Study or Subgroup | N+I | N or I alone | N-MH | Random, 95% CI | Risk Ratio | M-H, Random, 95% CI |
|-------------------|-----|--------------|------|---------------|------------|---------------------|
|                   |     |              |      |               |            |                     |
| **Total events**  | 129 | 122          |      |               |            |                     |
| **Heterogeneity** | Tau² = 0.00, Chi² = 3.00, df = 1 (P = 0.99), I² = 0% | | | | | |
| **Test for overall effect** | Z = 0.14 (P = 0.99) | | | | | |

### Figure S3: Forest plot for gastrointestinal adverse effects.

| Study or Subgroup | N+I | N or I alone | N-MH | Random, 95% CI | Risk Ratio | M-H, Random, 95% CI |
|-------------------|-----|--------------|------|---------------|------------|---------------------|
|                   |     |              |      |               |            |                     |
| **Total events**  | 250 | 173          |      |               |            |                     |
| **Heterogeneity** | Tau² = 0.13, Chi² = 2.03, df = 1 (P = 0.02), I² = 61% | | | | | |
| **Test for overall effect** | Z = 0.15 (P = 0.03) | | | | | |
| **Test for subgroup differences** | Chi² = 14.78, df = 1 (P = 0.0001), I² = 34.7% | | | | | |

**Figure S2:** Forest plot for haematological adverse effects.

**Figure S3:** Forest plot for gastrointestinal adverse effects.
### Figure S4: Forest plot for dermatological adverse effects.

| Study or Subgroup | N+I | Events | Total | N or I alone | Events | Total | Risk Ratio M-H, Random, 95% CI | Risk Ratio M-H, Random, 95% CI |
|-------------------|-----|--------|-------|--------------|--------|-------|-------------------------------|-------------------------------|
|                   |     |        |       |              |        |       |                               |                               |
| 5.3.1 N+I Vs N alone |     |        |       |              |        |       |                               |                               |
| Hodi 2019 (CheckMate 089) | 69  | 95  | 26  | 47  | 8.9% | 1.18 [0.91, 1.52] |                               |
| Hodi 2019 (CheckMate 087) | 205 | 213 | 162 | 311 | 10.2% | 1.12 [0.99, 1.27] |                               |
| Larin 2016 | 230 | 314 | 140 | 316 | 9.8% | 1.05 [0.89, 1.25] |                               |
| Larin 2016 | 205 | 213 | 162 | 311 | 10.2% | 1.12 [0.99, 1.27] |                               |
| Pethow 2015 | 72  | 95  | 25  | 45  | 5.3% | 1.36 [1.03, 1.81] |                               |
| Wochol 2017 | 205 | 313 | 161 | 311 | 10.2% | 1.13 [0.93, 1.37] |                               |
| Subtotal (95% CI) | 1443 | 1340 | 54.7% | 1.12 [1.06, 1.18] |                               |
| Total events | 986 | 561 |       |       |       |                               |                               |

Heterogeneity: $I^2 = 60.1\%$, $Q = 4.85$ ($P = 0.0001$)

### Figure S5: Forest plot for pulmonary adverse effects.

| Study or Subgroup | N+I | Events | Total | N or I alone | Events | Total | Risk Ratio M-H, Fixed, 95% CI | Risk Ratio M-H, Fixed, 95% CI |
|-------------------|-----|--------|-------|--------------|--------|-------|-------------------------------|-------------------------------|
|                   |     |        |       |              |        |       |                               |                               |
| 7.3.1 N+I Vs N alone |     |        |       |              |        |       |                               |                               |
| Hodi 2019 (CheckMate 089) | 10  | 95  | 1    | 47  | 3.7% | 4.95 [0.65, 37.51] |                               |
| Hodi 2019 (CheckMate 087) | 23  | 313 | 5    | 311 | 13.8% | 4.57 [1.76, 11.87] |                               |
| Larin 2016 | 23  | 313 | 5    | 311 | 13.8% | 4.57 [1.76, 11.97] |                               |
| Pethow 2015 | 10  | 95  | 2    | 45  | 7.5% | 2.37 [0.54, 10.36] |                               |
| Wochol 2017 | 12  | 313 | 5    | 311 | 13.8% | 4.37 [1.68, 11.40] |                               |
| Subtotal (95% CI) | 1129 | 1025 | 52.7% | 4.23 [2.57, 6.97] |                               |
| Total events | 98  | 18  |       |       |       |                               |                               |

Heterogeneity: $I^2 = 67\%$, $Q = 4$ ($P = 0.25$); $P = 0\%$

Test for overall effect: $Z = -5.66$ ($P < 0.00001$)

| Study or Subgroup | N+I | Events | Total | N or I alone | Events | Total | Risk Ratio M-H, Fixed, 95% CI | Risk Ratio M-H, Fixed, 95% CI |
|-------------------|-----|--------|-------|--------------|--------|-------|-------------------------------|-------------------------------|
|                   |     |        |       |              |        |       |                               |                               |
| 7.3.2 N+I Vs N alone |     |        |       |              |        |       |                               |                               |
| Hodi 2019 (CheckMate 089) | 1  | 11  | 1    | 12  | 2.6% | 1.08 [0.88, 15.41] |                               |
| Hodi 2019 (CheckMate 087) | 23  | 313 | 5    | 311 | 13.8% | 4.69 [1.77, 11.99] |                               |
| Larin 2016 | 23  | 313 | 5    | 311 | 13.8% | 4.69 [1.77, 11.99] |                               |
| Pethow 2015 | 5   | 35  | 1    | 25  | 3.2% | 3.57 [0.44, 28.71] |                               |
| Wochol 2017 | 22  | 313 | 5    | 311 | 13.8% | 4.40 [1.09, 11.47] |                               |
| Subtotal (95% CI) | 985 | 976 | 47.3% | 4.28 [2.54, 7.19] |                               |
| Total events | 74  | 17  |       |       |       |                               |                               |

Heterogeneity: $I^2 = 11.0\%$, $Q = 4$ ($P = 0.25$); $P = 0\%$

Test for overall effect: $Z = 5.48$ ($P < 0.00001$)

Test for subgroup difference: $I^2 = 0\%$, $Q = 4$ ($P = 0.25$); $P = 0\%$
Figure S6: Forest plot for liver adverse effects.

Figure S7: Forest plot for endocrine adverse effect