

## SUPPLEMENTARY TABLES

**Supplementary Table 2. Mendelian randomization results of different results.**

| Outcome                                                | Cases | Controls | MR model  | SNP | OR    | ll-96% | ul-95% | P-value   | P(heterogeneity) | P_pleiotropy |
|--------------------------------------------------------|-------|----------|-----------|-----|-------|--------|--------|-----------|------------------|--------------|
| Primary lymphoid and hematopoietic malignant neoplasms | 7519  | 299952   | MR Egger  | 132 | 1.787 | 1.309  | 2.439  | 3.713E-04 | 1.744E-06        |              |
|                                                        |       |          | WM        | 132 | 1.842 | 1.458  | 2.327  | 3.042E-07 |                  |              |
|                                                        |       |          | IVW       | 132 | 1.517 | 1.277  | 1.803  |           | 1.326E-06        | 0.219        |
|                                                        |       |          | MR-PRESSO | 130 | 1.607 | 1.358  | 1.901  | 3.223E-08 | 5.669E-05        | 0.211        |
| Non-follicular lymphoma                                | 2602  | 299952   | MR Egger  | 117 | 1.796 | 1.187  | 2.717  | 6.512E-03 | 1.645E-01        |              |
|                                                        |       |          | WM        | 117 | 1.793 | 1.238  | 2.597  | 2.019E-03 |                  |              |
|                                                        |       |          | IVW       | 117 | 1.585 | 1.246  | 2.017  | 1.736E-04 | 1.717E-01        | 0.470        |
|                                                        |       |          | MR-PRESSO | 116 | 1.677 | 1.334  | 2.107  | 9.234E-06 | 5.396E-01        | 0.555        |
| Non-Hodgkin lymphoma                                   | 1088  | 299952   | MR Egger  | 132 | 1.348 | 0.725  | 2.504  | 3.468E-01 | 5.594E-01        |              |
|                                                        |       |          | WM        | 132 | 1.420 | 0.798  | 2.526  | 2.325E-01 |                  |              |
|                                                        |       |          | IVW       | 132 | 1.701 | 1.208  | 2.396  | 2.368E-03 | 5.646E-01        | 0.378        |
|                                                        |       |          | MR-PRESSO | 132 | 1.701 | 1.208  | 2.396  | 2.368E-03 | 5.646E-01        | 0.378        |
| Follicular lymphoma                                    | 1081  | 299952   | MR Egger  | 133 | 0.831 | 0.399  | 1.730  | 6.213E-01 | 1.660E-05        |              |
|                                                        |       |          | WM        | 133 | 1.395 | 0.788  | 2.471  | 2.535E-01 |                  |              |
|                                                        |       |          | IVW       | 133 | 1.012 | 0.669  | 1.531  | 9.566E-01 | 1.871E-05        | 0.525        |
|                                                        |       |          | MR-PRESSO | 129 | 1.280 | 0.893  | 1.835  | 1.792E-01 | 1.322E-01        | 0.605        |
| Diffuse large B-cell lymphoma                          | 1010  | 287137   | MR Egger  | 133 | 1.643 | 0.865  | 3.121  | 1.320E-01 | 1.318E-01        |              |
|                                                        |       |          | WM        | 133 | 1.077 | 0.631  | 1.839  | 7.851E-01 |                  |              |
|                                                        |       |          | IVW       | 133 | 1.357 | 0.944  | 1.952  | 9.898E-02 | 1.380E-01        | 0.481        |
|                                                        |       |          | MR-PRESSO | 132 | 1.464 | 1.035  | 2.071  | 3.109E-02 | 4.109E-01        | 0.557        |
| Hodgkin lymphoma                                       | 780   | 376497   | MR Egger  | 133 | 1.281 | 0.642  | 2.560  | 4.836E-01 | 3.973E-01        |              |
|                                                        |       |          | WM        | 133 | 1.264 | 0.674  | 2.370  | 4.646E-01 |                  |              |
|                                                        |       |          | IVW       | 133 | 1.636 | 1.106  | 2.420  | 1.377E-02 | 4.041E-01        | 0.403        |
|                                                        |       |          | MR-PRESSO | 133 | 1.636 | 1.106  | 2.420  | 1.377E-02 | 4.041E-01        | 0.403        |
| Mature T/NK-cell lymphomas                             | 335   | 299952   | MR Egger  | 133 | 1.574 | 0.549  | 4.510  | 3.998E-01 | 4.145E-01        |              |
|                                                        |       |          | WM        | 133 | 1.568 | 0.586  | 4.201  | 3.705E-01 |                  |              |
|                                                        |       |          | IVW       | 133 | 0.694 | 0.380  | 1.266  | 2.332E-01 | 3.571E-01        | 0.066        |
|                                                        |       |          | MR-PRESSO | 133 | 0.694 | 0.380  | 1.266  | 2.332E-01 | 3.571E-01        | 0.066        |
| Mantle cell lymphoma                                   | 199   | 287173   | MR Egger  | 133 | 1.651 | 0.428  | 6.370  | 4.684E-01 | 6.627E-01        |              |
|                                                        |       |          | WM        | 133 | 1.734 | 0.476  | 6.315  | 4.035E-01 |                  |              |
|                                                        |       |          | IVW       | 133 | 3.134 | 1.457  | 6.739  | 3.452E-03 | 6.557E-01        | 0.261        |

|                               |      |        |           |     |       |       |        |           |           |       |
|-------------------------------|------|--------|-----------|-----|-------|-------|--------|-----------|-----------|-------|
| Marginal zone B-cell lymphoma | 192  | 287137 | MR-PRESSO | 133 | 3.134 | 1.457 | 6.739  | 3.452E-03 | 6.557E-01 | 0.261 |
|                               |      |        | MR Egger  | 133 | 1.478 | 0.355 | 6.146  | 5.920E-01 | 2.707E-01 |       |
|                               |      |        | WM        | 133 | 2.019 | 0.573 | 7.111  | 2.743E-01 |           |       |
|                               |      |        | IVW       | 133 | 1.041 | 0.465 | 2.328  | 9.227E-01 | 2.840E-01 | 0.559 |
| Lymphoid leukaemia            | 1493 | 299952 | MR-PRESSO | 133 | 1.041 | 0.465 | 2.328  | 9.227E-01 | 2.840E-01 | 0.559 |
|                               |      |        | MR Egger  | 131 | 3.917 | 2.126 | 7.218  | 2.453E-05 | 4.347E-01 |       |
|                               |      |        | WM        | 131 | 3.287 | 1.970 | 5.484  | 5.190E-06 |           |       |
|                               |      |        | IVW       | 131 | 2.560 | 1.865 | 3.514  | 5.915E-09 | 3.976E-01 | 0.114 |
| Chronic lymphocytic leukaemia | 624  | 287133 | MR-PRESSO | 131 | 2.560 | 1.865 | 3.514  | 5.915E-09 | 3.976E-01 | 0.114 |
|                               |      |        | MR Egger  | 132 | 4.734 | 2.091 | 10.714 | 2.846E-04 | 8.525E-01 |       |
|                               |      |        | WM        | 132 | 3.456 | 1.642 | 7.275  | 1.089E-03 |           |       |
|                               |      |        | IVW       | 132 | 2.797 | 1.780 | 4.395  | 8.208E-06 | 8.303E-01 | 0.132 |
| Acute lymphocytic leukaemia   | 184  | 287136 | MR-PRESSO | 132 | 2.797 | 1.780 | 4.395  | 8.208E-06 | 8.303E-01 | 0.132 |
|                               |      |        | MR Egger  | 132 | 8.887 | 1.994 | 39.598 | 4.856E-03 | 7.909E-01 |       |
|                               |      |        | WM        | 132 | 2.214 | 0.559 | 8.771  | 2.578E-01 |           |       |
|                               |      |        | IVW       | 132 | 2.655 | 1.159 | 6.080  | 2.092E-02 | 7.367E-01 | 0.059 |
| Multiple myeloma              | 674  | 376603 | MR-PRESSO | 132 | 2.655 | 1.159 | 6.080  | 2.092E-02 | 7.367E-01 | 0.059 |
|                               |      |        | MR Egger  | 132 | 3.470 | 1.410 | 8.540  | 7.694E-03 | 1.273E-01 |       |
|                               |      |        | WM        | 132 | 3.053 | 1.391 | 6.701  | 5.406E-03 |           |       |
|                               |      |        | IVW       | 132 | 1.852 | 1.121 | 3.059  | 1.616E-02 | 1.052E-01 | 0.103 |
|                               |      |        | MR-PRESSO | 132 | 1.852 | 1.121 | 3.059  | 1.616E-02 | 1.052E-01 | 0.103 |

p heterogeneity,  $p$ -value of Cochrane's  $Q$ -value in heterogeneity test,  $P_{\text{pleiotropy}}$ ,  $p$ -value of MR-Egger intercept.