**Online-Only Supplement material**

List of included elements:

eTable 1 Event rate and time at risk overall and by sex

eFigure 1. Area under the receiver-operating characteristic curves at 1 year of follow up, in the a) female Ontario internal validation cohort, b) male Ontario internal validation cohort, c) female UK external validation cohort, and d) male UK external validation cohort.

eFigure 2. Area under the receiver-operating characteristic curves at 5 years of follow up, in the a) female Ontario internal validation cohort, b) male Ontario internal validation cohort, c) female UK external validation cohort, and d) male UK external validation cohort.

eFigure 3. Area under the receiver-operating characteristic curves at 9 years of follow up, in the a) female Ontario internal validation cohort, b) male Ontario internal validation cohort, c) female UK external validation cohort, and d) male UK external validation cohort.

**eTable 1. Event rate and time at risk overall and by sex**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | No. incident  diabetes cases | No. heart failure  events | No. competing  events | Person-years at risk | Rate per 10,000 py  (95% CI) |
| Ontario | | | | | |
| Female | 191455 | 8,272 | 8654 | 921,656 | 89.8 (87.8-91.7) |
| Male | 156572 | 5,769 | 5789 | 766,610 | 75.3 (73.3-77.2) |
| UK | | | | | |
| Female | 24,664 | 1,107 | 2,362 | 118,807 | 93.2 (87.9-98.8) |
| Male | 29,819 | 1,494 | 2,711 | 144,466 | 103.4 (98.3-108.8) |

Abbreviations: py = person years; CI = confidence interval

eFigure 1. Area under the receiver-operating characteristic curves at 1 year of follow up, in the a) female Ontario internal validation cohort, b) male Ontario internal validation cohort, c) female UK external validation cohort, and d) male UK external validation cohort.

|  |  |
| --- | --- |
| a) Ontario internal validation (Female) | b) Ontario internal validation (Male) |
| c) UK external validation (Female)  Chart, line chart  Description automatically generated | d) UK external validation (Male)  Chart, line chart  Description automatically generated |

eFigure 2. Area under the receiver-operating characteristic curves at 5 years of follow up, in the a) female Ontario internal validation cohort, b) male Ontario internal validation cohort, c) female UK external validation cohort, and d) male UK external validation cohort.

|  |  |
| --- | --- |
| a) Ontario internal validation (Female) | b) Ontario internal validation (Male) |
| c) UK external validation (Female)  Chart, line chart  Description automatically generated | d) UK external validation (Male)  Chart, line chart  Description automatically generated |

eFigure 3. Area under the receiver-operating characteristic curves at 9 years of follow up, in the a) female Ontario internal validation cohort, b) male Ontario internal validation cohort, c) female UK external validation cohort, and d) male UK external validation cohort.

|  |  |
| --- | --- |
| a) Ontario internal validation (Female)  **Chart, line chart  Description automatically generated** | b) Ontario internal validation (Male)  **Chart  Description automatically generated** |
| c) UK external validation (Female)  Chart, line chart  Description automatically generated | d) UK external validation (Male)  Chart, line chart  Description automatically generated |