### Table SI. Definition of squamous cell carcinoma, drugs and comorbidities

<table>
<thead>
<tr>
<th>Disease or drug</th>
<th>Definition</th>
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</thead>
<tbody>
<tr>
<td>Cutaneous squamous cell carcinoma</td>
<td>ICD10-codes: C44 or C00 and/or ICD-O/3: 80701 or 80703 or 72850 or 80702 or 80812</td>
</tr>
<tr>
<td>Organ transplant</td>
<td>ICD10-codes: Z94.0,1,2,3,4,6,8,9</td>
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<tr>
<td>HIV</td>
<td>B20-24; Z21</td>
</tr>
<tr>
<td>Alcohol-associated comorbidity</td>
<td>ICD10-codes: F10; G31.2; G62.1; G72.1; J42.6; K70.0-4,9; K86.0 and/or ATC-code starting with N07BB</td>
</tr>
<tr>
<td>Smoking-associated comorbidity</td>
<td>ICD10-codes: J42–J44 and/or ATC-code starting with N07BA</td>
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<tr>
<td>Actinic keratosis</td>
<td>ICD10-code: L57.0</td>
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<tr>
<td>Crohn’s disease</td>
<td>ICD10-code: K50.0,1,8,9</td>
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<tr>
<td>Diabetes</td>
<td>ICD10-codes: E10–E14 and/or ATC-code starting with A10</td>
</tr>
<tr>
<td>Liver disease</td>
<td>ICD10-codes: B15.9; B16.9; B17.1,8; B18.0–B18.2; B19.9; D13.4; D37.6; K70.1; K71.0,1,2,5,9; K72.0,1,9; K73.0,2,9; K74.6; K75.0,3,4,9; K76.0,8,9; O26.6; O26.8E; Q44.6; R16.0; R74.0; R93.2; S36.1; S36.10; S36.11; T86.4</td>
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<tr>
<td>Peptic ulcer (gastric and duodenal ulcer)</td>
<td>ICD10-codes: K25.0–9; K26.0–9</td>
</tr>
<tr>
<td>Kidney-associated disease</td>
<td>ICD10-codes: I12.0,9; I13.1,2; N17.0,1,2,8,9; N18.2,3,4,5,9; N19.9; N99.0; 090.4; P96.0</td>
</tr>
<tr>
<td>Rheumatoid arthritis</td>
<td>ICD10-codes: M05.0,2,3,8,9; M06.0,1,2,3,4,8,9</td>
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<tr>
<td>Psoriasis</td>
<td>ICD10-code: L40</td>
</tr>
<tr>
<td>Psoriatic arthritis</td>
<td>ICD10-codes: M07.0,1,2,3; L40.5</td>
</tr>
<tr>
<td>Immunosuppressive drugs other than methotrexate</td>
<td>ATC code starting with L04A (not L04AX03)</td>
</tr>
<tr>
<td>Ciclosporin</td>
<td>ATC code: L04AD01</td>
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<tr>
<td>Acitretin</td>
<td>ATC code: D05BB02</td>
</tr>
<tr>
<td>Methotrexate</td>
<td>ATC codes: L04AX03 and/or L01BA01</td>
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<tr>
<td>Azathioprine</td>
<td>ATC code: L04AX01</td>
</tr>
<tr>
<td>Tumour necrosis factor-o inhibitor</td>
<td>ATC code starting with L04AB</td>
</tr>
<tr>
<td>Interleukin pathway inhibitor</td>
<td>ATC code starting with L04AC</td>
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</tbody>
</table>

Any of the listed International Classification of Diseases, Tenth Revision (ICD-10) codes relating to the respective comorbidity classes in the outpatient register or inpatient register in the period 2001 to the index date in the respective comorbidity class were sufficient to be considered having that specific comorbidity. The index date was in the period 2010 to 2016. The ICD-10 codes were obtained from the Swedish inpatient and outpatient registry in the period 2001 to the index date. If a patient had dispensed any drug starting with the Anatomical Therapeutic Chemical (ATC)-codes N07BB, N07BA or A10, the patient was considered to have an alcohol-associated comorbidity, smoking-associated comorbidity or diabetes, respectively. ICD-O/3: International Classification of Diseases for Oncology, third edition.