

Appendix 1: Detailed definitions of potential risk factors

Variable	Definition	Data source(s)	Exposure Start	Exposure End	Refs
1. TB-related factors					
TB incidence in country of origin	TB Incidence (All TB forms/100,000 population) in the country of birth in the year of arrival to Canada	CIC / WHO TB Incidence Rates	Index date	End of study follow-up (i.e. no end of exposure)	(1,2)
BCG positive	Recorded as BCG positive OR Probable BCG positive based on birth year and birth country	TB Registry / Literature	Index date	End of study follow-up	(1,3,4)
Active TB Contact	Close contact includes household/Type 1 exposures	TB Registry	Date of contact	End of study follow-up	(1)
Abnormal chest x-ray	Result of chest x-ray (abnormal vs normal/unknown)	TB Registry	Date x-ray read	End of study follow-up	(1)
TST positive	First positive skin test (Recorded as positive test or induration ≥ 10 mm)	TB Registry	Date skin test read	End of study follow-up	(1)
IGRA positive	First positive IGRA test	TB Registry	Date IGRA read	End of study follow-up	(1)
LTBI treatment completed	LTBI treatment completed (recorded as completed-satisfactory or completed-unsatisfactory) OR Estimated percent completion $\geq 80\%$ of recommended doses based on TB drug dispensation records	TB Registry	30 days after date first LTBI drug dispensed	End of study follow-up	(1)
Referred by IRCC for post-landing surveillance	Date BCCDC received post-landing surveillance form	TB Registry	Date form received from IRCC	End of study follow-up	(1,5)
2. Medical Co-morbidities					
HIV/AIDS	HIV positive test or AIDS case recorded OR [≥ 1 hospital discharge records OR ≥ 2 MD billing records within 2 years with an ICD diagnosis code of HIV/AIDS: ICD9 042-044/ ICD10 B20-B24]*	BC HIV Registry / MSP/ DAD	90 days before first HIV positive test date or diagnosis date [¶]	End of study follow-up	(6,7)
Silicosis	[≥ 1 hospital discharge records OR ≥ 2 MD billing records within 2 years with an ICD diagnosis code of silicosis: ICD9 502, ICD10 J62]	MSP/ DAD	90 days before diagnosis date	End of study follow-up	-

Chronic kidney disease (CKD)	1+ chronic dialysis records in PROMIS OR 2+ physician billing records separated by at least 90 days with an MSP billing fee item code for dialysis (323, 324, 350-352, 355, 356, 358, 359, 361, 7598, 7599, 33723, 33750-33752, 33708, 33756, 33758, 33759, 33761, 77390, 77380) OR Any GFR<30 ml/min in PROMIS	BC Renal Agency (PROMIS)/ MSP	90 days before diagnosis date	End of study-follow-up	(8,9)
Cancer	Primary cancers of type=blood, head and neck, lung, or other solid organ (breast, gastrointestinal, genitourinary)	BC Cancer Registry	90 days before diagnosis date	5 years after cancer diagnosis date	(10,11)
Medical immuno-suppression	Treatment episodes: ≥ 1 dispensation records of immunosuppressant medications (See Appendix Table 2 for list of drugs included) For <i>steroid</i> treatment episodes: convert doses to prednisone equivalents, include when there was a minimum dispensation of 20mg daily for 14 days, within a 21 day period	Pharmanet	30 days after first drug dispense date	180 days after last drug dispense date	(12,13)
Diabetes	[1+ hospital discharge records OR 2+ MD billing records within 2 years with a diagnosis code of diabetes mellitus: ICD9 250.x / ICD10 E10.x-E14.x]‡	MSP/ DAD	90 days before diagnosis date	End of study-follow-up	(14,15)
Solid organ transplant	≥ 1 procedure code in hospital discharge records for transplant: CCP 455, 456, 495, 5899, 6249, 5352, 6484, 6483, 6759, 7792 / CCI: 1GR85, 1GT85, 1HY85, 1HZ85, 1NK85, 1NP85, 1OA85, 1OB85, 1OJ85, 1OK85, 1PC85, 1RB85)§	DAD	Transplant date	End of study-follow-up	(16,17)

IRCC=Immigration, Refugees, and Citizenship Canada; ICD=International Classification of Diseases; DAD=hospital discharge abstract database; MSP=Medical Services Plan physician billing; CCI=Canadian Classification of Interventions; CCP=Canadian Classification of Procedures; PPV=positive predictive value; NPV=negative predictive value

*93.2% sensitivity, 99.4% specificity(6)

‡ Pooled from 6 studies: 82.3% sensitivity, 92.9% specificity(15)

§ CCI code for kidney transplantation: 98% sensitivity, 98% PPV(16)

¶When comorbidity identified using only MSP/DAD data, 'diagnosis date'=first date when algorithm is met (i.e. if rule requires 2 or more MSP billing records, take as the earliest date of the 2 billing records)

Appendix 2: Immunosuppressive Drugs

Immunosuppressive drug type	Drugs included
1. Cytotoxic (anti-neoplastic)	All drugs in AHFS class 10:00:00 (Antineoplastic Agents), excluding 'biologics' (see below in #3), Cyclophosphamide (see #4), Methotrexate (see #5), and Letrozole, Tamoxifen Citrate, and Tretinoin
2. TNF-alpha inhibitors	<u>AHFS class 92:36 (Disease modifying antirheumatic agents)</u> Adalimumab Etanercept Golimumab Infliximab
3. Other biologics	<u>AHFS class 10:00:00 (Anti-neoplastic)</u> Alemtuzumab Bevacizumab Bortezomib Cetuximab Dabrafenib Mesylate Dasatinib Erlotinib HCl Gefitinib Ipilimumab Lapatinib Ditosylate Nilotinib HCl Panitumumab Regorafenib Rituximab Ruxolitinib Phosphate Sorafenib Tosylate Sunitinib Malate Trastuzumab Vemurafenib <u>AHFS class 92:20:00 (Biologic Response Modifier)</u> Natalizumab <u>AHFS class 92:36 (Disease modifying antirheumatic agents)</u> Abatacept Anakinra <u>AHFS class 92:44:00 (Immunosuppressive Agents)</u> Basiliximab Belimumab
4. Dmards-high risk	<u>AHFS class 10:00 (Antineoplastic Agents)</u> Cyclophosphamide <u>AHFS class 92:36 (Disease modifying antirheumatic agents)</u> Leflunomide <u>AHFS class 92:44 (Immunosuppressive agents)</u> Cyclosporine Mycophenolate Sirolimus Tacrolimus
5. Dmards-low risk	<u>AHFS class 08:12:20 (Sulfonamides)</u> Sulfasalazine <u>AHFS class 10:00 (Antineoplastic Agents)</u> Methotrexate <u>All drugs of class AHFS 60:00:00 (Gold Compounds)</u> <u>AHFS class 92:44 (Immunosuppressive agents)</u> Azathioprine
6. Steroids	All drugs of AHFS class 68:04:00 (Hormones and substitutes, adrenals), excluding

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