

Supplemental Methods

The validated claims-based algorithm, identifies keratinocyte carcinoma if the index claim (specimen collection) is not for an anogenital site and any one of the following 3 criteria is present:

- (1) index claim for cutaneous specimen collection (biopsy or surgery), followed by any claim accompanied by International Classification of Diseases (ICD)-9 diagnosis code 173 or ICD-10-CA diagnosis code C44 (nonmelanoma skin cancer) in the subsequent 180 days
- (2) index claim for skin cancer surgical treatment accompanied by ICD diagnosis code 173 or C44
- (3) hospital discharge record with ICD diagnosis code 173 or C44.

Reference:

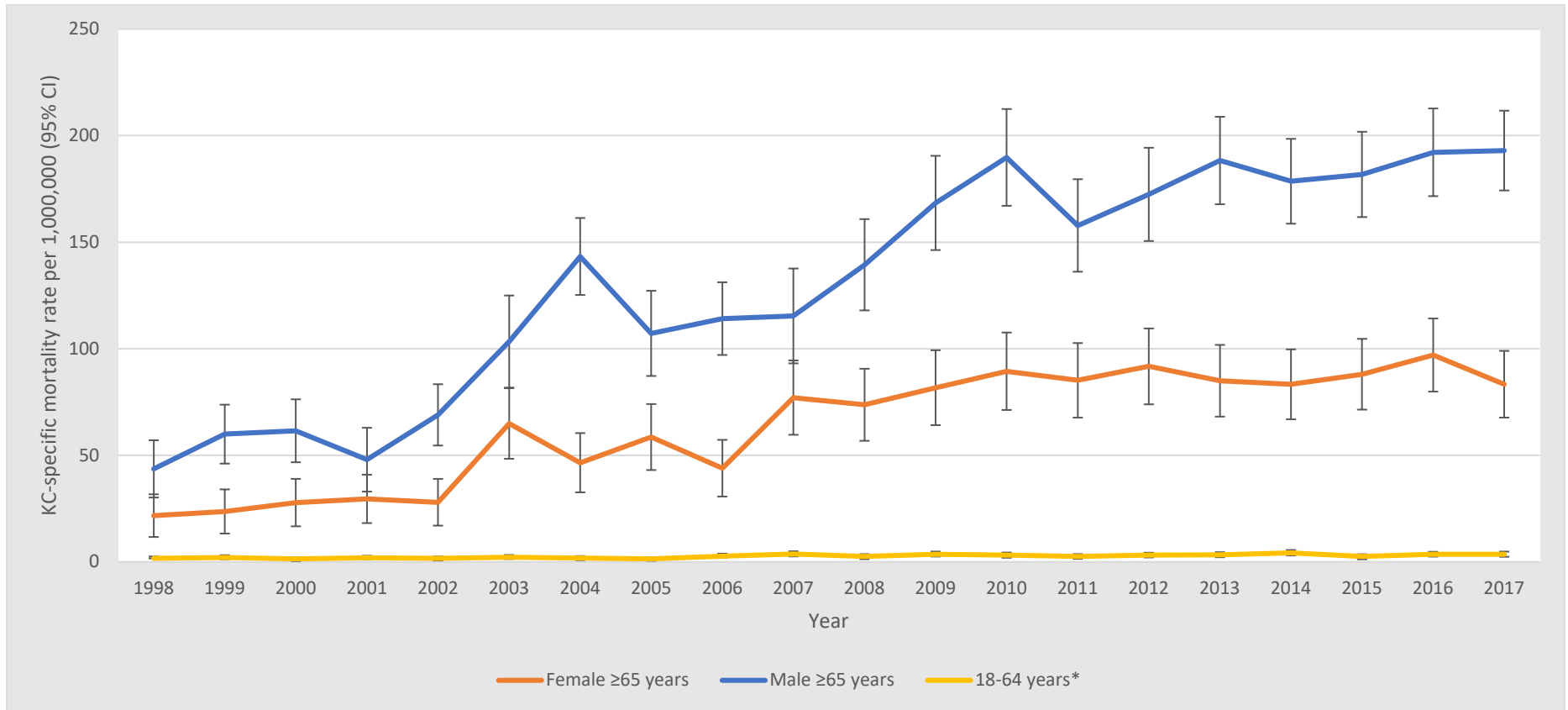
Chan AW, Fung K, Tran JM, Kitchen J, Austin PC, Weinstock MA, et al. Application of Recursive Partitioning to Derive and Validate a Claims-Based Algorithm for Identifying Keratinocyte Carcinoma (Nonmelanoma Skin Cancer). *JAMA Dermatol*. 2016;152(10):1122-7.

Supplemental Tables and Figures

Table S1. Annual crude KC incidence and KC-specific mortality rates among white adults in Ontario (1998-2017)

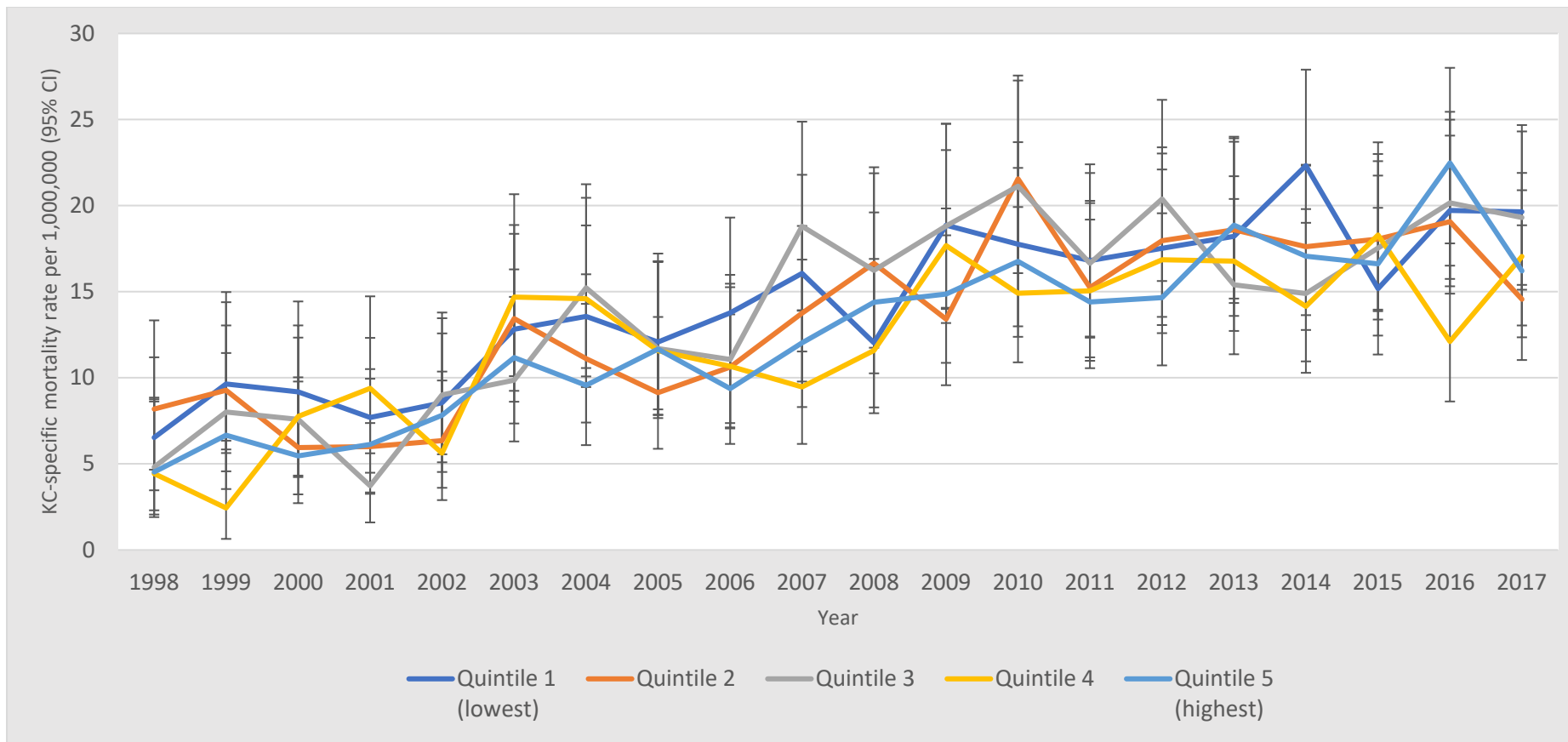
Year of diagnosis	Crude incidence rate per 100,000 white adults (95% CI)	Crude KC-specific mortality rate per 1,000,000 white adults (95% CI)
1998	382.6 (379.1-386.2)	7.44 (5.89-9.33)
1999	372.4 (369-375.9)	9.57 (7.82-11.65)
2000	361.1 (357.8-364.4)	9.58 (7.85-11.64)
2001	362.8 (359.6-366)	9.20 (7.53-11.19)
2002	343.3 (340.3-346.4)	10.63 (8.85-12.72)
2003	332.5 (329.5-335.4)	18.51 (16.15-21.17)
2004	339.2 (336.2-342.1)	19.76 (17.35-22.47)
2005	352.3 (349.3-355.2)	17.82 (15.56-20.37)
2006	368.7 (365.8-371.7)	18.45 (16.17-21.03)
2007	365.1 (362.2-367.9)	23.89 (21.30-26.77)
2008	381.3 (378.4-384.2)	25.00 (22.38-27.91)
2009	388.1 (385.3-391)	30.42 (27.56-33.57)
2010	399.4 (396.6-402.3)	33.79 (30.80-37.06)
2011	423.6 (420.8-426.5)	30.08 (27.30-33.14)
2012	421.7 (418.9-424.5)	34.24 (31.30-37.46)
2013	441.7 (438.9-444.5)	36.48 (33.47-39.75)
2014	447.9 (445.2-450.7)	37.20 (34.19-40.47)
2015	459.8 (457.1-462.6)	37.65 (34.65-40.91)
2016	480.6 (477.9-483.4)	42.51 (39.35-45.93)
2017	488.9 (486.2-491.6)	41.84 (38.74-45.20)

Figure S1. Annual crude KC-specific mortality rates by sex and age among adults in Ontario (1998-2017)



* To protect privacy, younger age groups were combined and not stratified by sex so that no data cell contained fewer than 6 individuals.

Figure S2. Annual standardized KC-specific mortality rates by income quintile among Ontario adults (1998-2017)



KC-specific mortality rates were age- and sex-standardized using the 1991 Canadian population