



Appendix

**This appendix was part of the submitted manuscript and has been peer reviewed.
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Appendix to: Pandeya N, Olsen CM, Whiteman DC. The incidence and multiplicity rates of keratinocyte cancers in Australia. *Med J Aust* 2017; 207: 339-343. doi: 10.5694/mja17.00284.

Supplementary Table 1: Medicare Benefit Schedule description of 8 item codes that were used to define histological diagnosis of Keratinocyte cancers in our primary analysis.

Item codes	Item descriptions
31255	BASAL CELL CARCINOMA OR SQUAMOUS CELL CARCINOMA (including keratoanthoma), removal from nose, eyelid, lip, ear, digit or genitalia, <u>tumour size up to and including 10mm in diameter</u> - where removal is by therapeutic surgical excision (other than by shave excision) and suture and <i>where the initial specimen removed is sent for histological examination and malignancy confirmed, and any subsequently excised specimen is sent for histological examination</i>
31260	BASAL CELL CARCINOMA OR SQUAMOUS CELL CARCINOMA (including keratoanthoma), removal from nose, eyelid, lip, ear, digit or genitalia, <u>tumour size more than 10mm in diameter</u> - where removal is by therapeutic surgical excision (other than shave excision) and suture <i>and where the initial specimen removed is sent for histological examination and malignancy confirmed, and any subsequently excised specimen is sent for histological examination</i>
31265	BASAL CELL CARCINOMA OR SQUAMOUS CELL CARCINOMA (including keratoanthoma), removal from face, neck, (anterior to the sternomastoid muscles) or lower leg (mid calf to ankle), <u>tumour size up to and including 10mm in diameter</u> and where removal is by therapeutic surgical excision (other than by shave excision) and suture, <i>where the initial specimen removed is sent for histological examination and malignancy confirmed, and any subsequently excised specimen is sent for histological examination</i>
31270	BASAL CELL CARCINOMA OR SQUAMOUS CELL CARCINOMA (including keratoanthoma), removal from face, neck, (anterior to the sternomastoid muscles) or lower leg (mid calf to ankle), <u>tumour size more than 10mm and up to and including 20mm in diameter</u> and where removal is by therapeutic surgical excision (other than by shave excision) and suture, <i>where the initial specimen removed is sent for histological examination and malignancy confirmed, and any subsequently excised specimen is sent for histological examination</i>
31275	BASAL CELL CARCINOMA OR SQUAMOUS CELL CARCINOMA (including keratoanthoma), removal from face, neck (anterior to the sternomastoid muscles) or lower leg (mid calf to ankle), <u>tumour size more than 20mm in diameter</u> and where removal is by therapeutic surgical excision (other than by shave excision) and suture, <i>where the initial specimen removed is sent for histological examination and malignancy confirmed, and any subsequently excised specimen is sent for histological examination</i>
31280	BASAL CELL CARCINOMA OR SQUAMOUS CELL CARCINOMA (including keratoanthoma), removal from areas of the body not covered by items 31255 and 31265, <u>tumour size up to and including 10mm in diameter</u> and where removal is by therapeutic surgical excision (other than by shave excision) and suture, <i>where the initial specimen removed is sent for histological examination and malignancy confirmed, and any subsequently excised specimen is sent for histological examination</i>
31285	BASAL CELL CARCINOMA OR SQUAMOUS CELL CARCINOMA (including keratoanthoma), removal from areas of the body not covered by items 31260 and 31270, <u>tumour size more than 10mm and up to and including 20mm in diameter</u> and where removal is by therapeutic surgical excision (other than by shave excision) and suture, <i>where the initial specimen removed is sent for histological examination and malignancy confirmed, and any subsequently excised specimen is sent for histological examination</i>
31290	BASAL CELL CARCINOMA OR SQUAMOUS CELL CARCINOMA (including keratoanthoma), removal from areas of the body not covered by items 31260 and 31275, <u>tumour size more than 20mm in diameter</u> and where removal is by therapeutic surgical excision (other than by shave excision) and suture, <i>where the initial specimen removed is sent for histological examination and malignancy confirmed, and any subsequently excised specimen is sent for histological examination</i>

Supplementary Table 2: BCC to SCC ratio by age and sex, estimated using QSKIN* data

Age group	Women	Men
40-44	11.5	8.01
45-49	7.8	3.02
50-54	4.6	3.33
55-59	3.2	3.74
60-64	2.9	2.44
65-69	2.2	2.08
70-74	2.5	2.25

*Minimum age in the QSKIN study participants was 40 years.

Supplementary Table 3 Multiplicity of keratinocyte cancer excisions in Australia, 2011–2014, by age and sex (numbers of people affected)

Age group	All			Women			Men		
	None	One	Two or more	None	One	Two or more	None	One	Two or more
20-39	642 058	3639	1006	326 128	1765	443	315 930	1874	563
40-59	580 531	21 976	10 679	295 214	10 219	4062	285 317	11 757	6617
60-79	299 796	31 406	25 889	157 615	14 446	9465	142 181	16 960	16 424
≥80	69 940	8672	8601	44 479	4893	3835	25 461	3779	4766
Overall	1 592 325	65 693	46 175	823 436	31 323	17 805	768 889	34 370	28 370

Supplementary Table 4 Incidence of keratinocyte cancers (person-based) stratified by past history of excision: national and state comparisons, Australia 2011-2014

	KC incidence (per 100,000) ¹		
	Past history of KC excision	No past history of KC excision	SIR (95%CI) ²
Australia	7067	837	8.4 (8.3 – 8.6)
QLD	8917	1394	6.4 (6.2 – 6.6)
NSW+ACT	6699	813	8.2 (8.0 – 8.5)
VIC+TAS	5233	593	8.8 (8.3 – 9.3)
WA	6322	832	7.6 (7.1 – 8.1)
SA+NT	5447	665	8.2 (7.5 – 9.0)

¹Incidence age standardised to the Australian Standard Population; ²ratio of incidence (age-standardised) among those with past history of KC excision to those with no past history of KC excision

Supplementary Table 5 Absolute and relative incidence (lesion-based) of keratinocyte cancers, and estimated incidence of basal and squamous cell carcinomas: national and state comparisons, 2011-2014.

State	KC ¹ incidence (per 100,000) ²				BCC ⁴ incidence (per 100,000)			SCC ⁵ incidence (per 100,000)		
	Women	Men	Persons	SIR ³	Women	Men	Persons	Women	Men	Persons
Australia	2250	4158	3154	1.00 (Reference)	1149	2027	1565	381	800	580
QLD	4466	8015	6174	1.96 (1.94 – 1.97)	2289	3919	3074	748	1531	1125
NSW+ACT	2060	3931	2947	0.93 (0.92 – 0.94)	1050	1915	1460	351	759	544
VIC+TAS	1303	2311	1771	0.56 (0.55 – 0.57)	660	1120	874	226	451	330
WA	2031	3773	2862	0.91 (0.89 – 0.92)	1036	1837	1418	345	729	528
SA+NT	1451	2734	2055	0.65 (0.64 – 0.66)	738	1327	1015	249	532	382

¹KC- Keratinocyte cancers; ²Incidence age standardised to the Australian Standard Population; ³ Standardised Incidence Ratio; ⁴BCC- Basal Cell Carcinoma; ⁵SCC Squamous cell carcinoma