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Table SI. Characteristics of men and women diagnosed with a first verified primary invasive melanoma in Norway 1983–2019, by period of diagnosis, n=45,524.

Characteristic	Women (n=23,459)			Men (n=22,065)		
	1983–1999 n=7,637	2000–2007 n=4,602	2008–2019 n=11,220	1983–1999 n=6,511	2000–2007 n=4,124	2008–2019 n=11,430
Age at diagnosis, median (IQR)	56 (42 – 71)	60 (46 – 74)	63 (50 – 75)	59 (46 – 71)	63 (52 – 74)	67 (56 – 76)
Age group, n (%)						
<40	1,614 (21.1)	694 (15.1)	1,138 (10.1)	909 (14.0)	342 (8.3)	607 (5.3)
40–59	2,618 (34.3)	1,560 (33.9)	3,671 (32.7)	2,396 (36.8)	1,351 (32.8)	3,072 (26.9)
60–79	2,609 (34.2)	1,628 (35.4)	4,462 (39.8)	2,645 (40.6)	1,823 (44.2)	5,795 (50.7)
80+	796 (10.4)	720 (15.6)	1,949 (17.4)	561 (8.6)	608 (14.7)	1,956 (17.1)
Months of survival, median (IQR)	250 (87 – 322)	161 (84 – 195)	49 (21 – 86)	143 (37 – 283)	135 (39 – 179)	42 (18 – 78)
Residential region, n (%)						
South-Eastern	4,827 (63.2)	2,744 (59.6)	6,633 (59.1)	4,187 (64.3)	2,511 (60.9)	6,819 (59.7)
Western	891 (11.7)	624 (13.6)	1,454 (13.0)	786 (12.1)	548 (13.3)	1,431 (12.5)
Central	1,521 (19.9)	999 (21.7)	2,469 (22.0)	1,177 (18.1)	851 (20.6)	2,447 (21.4)
Northern	398 (5.2)	235 (5.1)	664 (5.9)	361 (5.5)	214 (5.2)	733 (6.4)
Anatomic site, n (%)						
Head/neck	1,050 (14.4)	620 (14.1)	1,292 (12.0)	973 (16.0)	639 (16.6)	1,673 (15.5)
Upper limbs	1,143 (15.6)	758 (17.2)	1,852 (17.2)	580 (9.5)	404 (10.5)	1,210 (11.2)
Trunk	2,214 (30.3)	1,460 (33.1)	3,935 (36.5)	3,694 (60.6)	2,274 (59.0)	6,475 (60.0)
Lower limbs	2,876 (39.4)	1,546 (35.1)	3,659 (33.9)	827 (13.6)	524 (13.6)	1,394 (12.9)
Other	21 (0.3)	23 (0.5)	48 (0.4)	20 (0.3)	15 (0.4)	48 (0.4)
Unspecified	333	195	434	417	268	630

Characteristic	Women (n=23,459)			Men (n=22,065)		
	1983–1999 n=7,637	2000–2007 n=4,602	2008–2019 n=11,220	1983–1999 n=6,511	2000–2007 n=4,124	2008–2019 n=11,430
Histopathological subtype, n (%)						
Superficial spreading	4,565 (71.2)	2,466 (69.5)	6,479 (73.5)	3,593 (66.9)	1,955 (63.2)	6,037 (69.2)
Nodular	1,376 (21.5)	843 (23.7)	1,739 (19.7)	1,475 (27.5)	955 (30.9)	2,134 (24.5)
Lentigo maligna	330 (5.1)	150 (4.2)	419 (4.8)	193 (3.6)	107 (3.5)	362 (4.1)
Other	139 (2.2)	91 (2.6)	172 (2.0)	108 (2.0)	74 (2.4)	194 (2.2)
Unspecified	1,227	1,052	2,411	1,142	1,033	2,703
Ulceration, n (%)¹						
Absent		639 (57.0)	9,238 (86.3)		525 (44.1)	8,702 (81.5)
Present		482 (43.0)	1,461 (13.7)		665 (55.9)	1,977 (18.5)
Unspecified		3,481	521		2,934	751
Tumour thickness, median (IQR)	1.0 (0.6 – 2.0)	1.0 (0.6 – 2.0)	0.9 (0.5 – 1.8)	1.3 (0.7 – 2.8)	1.3 (0.7 – 3.0)	1.0 (0.6 – 2.3)
T category, n (%)						
T1 (≤1.0 mm)	3,006 (53.4)	2,093 (52.2)	6,072 (58.0)	2,125 (44.2)	1,486 (42.3)	5,259 (50.4)
T2 (>1.0–2.0 mm)	1,277 (22.7)	949 (23.7)	2,217 (21.2)	1,105 (23.0)	843 (24.0)	2,259 (21.6)
T3 (>2.0–4.0 mm)	855 (15.2)	560 (14.0)	1,220 (11.7)	909 (18.9)	704 (20.0)	1,640 (15.7)
T4 (>4.0 mm)	489 (8.7)	404 (10.1)	961 (9.2)	668 (13.9)	483 (13.7)	1,280 (12.3)
Unspecified	2,010	596	750	1,704	608	992

IQR: interquartile range

% does not include the unspecified cases

¹ Ulceration reported from year 2000

Table SII. Characteristics of men and women diagnosed with a first verified primary invasive melanoma in Norway 1983–2019, by non-missing and missing tumour thickness and period of diagnosis, n=45,524.

Characteristic	Not missing (n=38,864)				Missing (n= 6,660)			
	Overall n=38,864	1983–1999 n=10,434	2000–2007 n=7,522	2008–2019 n=20,908	Overall n=6,660	1983–1999 n=3,714	2000–2007 n=1,204	2008–2019 n=1,742
Age at diagnosis, median (IQR)	63 (49 – 74)	57 (44 – 70)	61 (49 – 74)	65 (53 – 75)	63 (48 – 74)	59 (45 – 72)	63 (51 – 76)	68 (54 – 78)
Age group, n (%)								
<40	4,442 (11.4)	1,906 (18.3)	916 (12.2)	1,620 (7.7)	862 (12.9)	617 (16.6)	120 (10.0)	125 (7.2)
40–59	12,602 (32.4)	3,759 (36.0)	2,541 (33.8)	6,302 (30.1)	2,066 (31.0)	1,255 (33.8)	370 (30.7)	441 (25.3)
60–79	16,199 (41.7)	3,814 (36.6)	2,938 (39.1)	9,447 (45.2)	2,763 (41.5)	1,440 (38.8)	513 (42.6)	810 (46.5)
80+	5,621 (14.5)	955 (9.2)	1,127 (15.0)	3,539 (16.9)	969 (14.5)	402 (10.8)	201 (16.7)	366 (21.0)
Months of survival, median (IQR)	74 (31 – 159)	232 (68 – 304)	155 (64 – 191)	46 (21 – 83)	74 (16 – 213)	151 (28 – 311)	88 (12 – 174)	24 (6 – 64)
Residential region, n (%)								
South-Eastern	23,553 (60.6)	6,744 (64.6)	4,472 (59.5)	12,337 (59.0)	4,168 (62.6)	2,270 (61.1)	783 (65.0)	1,115 (64.0)
Western	4,767 (12.3)	1,059 (10.1)	1,012 (13.5)	2,696 (12.9)	967 (14.5)	618 (16.6)	160 (13.3)	189 (10.8)
Central	8,349 (21.5)	2,136 (20.5)	1,650 (21.9)	4,563 (21.8)	1,115 (16.7)	562 (15.1)	200 (16.6)	353 (20.3)
Northern	2,195 (5.6)	495 (4.7)	388 (5.2)	1,312 (6.3)	410 (6.2)	264 (7.1)	61 (5.1)	85 (4.9)
Anatomic site, n (%)								
Head/neck	5,244 (13.6)	1,436 (14.0)	1,058 (14.2)	2,750 (13.2)	1,003 (21.1)	587 (18.9)	201 (24.5)	215 (25.9)
Upper limbs	5,370 (14.0)	1,340 (13.0)	1,060 (14.2)	2,970 (14.3)	577 (12.1)	383 (12.3)	102 (12.4)	92 (11.1)
Trunk	18,116 (47.1)	4,638 (45.1)	3,394 (45.6)	10,084 (48.6)	1,936 (40.7)	1,270 (40.9)	340 (41.4)	326 (39.3)
Lower limbs	9,609 (25.0)	2,847 (27.7)	1,901 (25.5)	4,861 (23.4)	1,217 (25.6)	856 (27.6)	169 (20.6)	192 (23.1)
Other	151 (0.4)	31 (0.3)	29 (0.4)	91 (0.4)	24 (0.5)	10 (0.3)	9 (1.1)	5 (0.6)
Unspecified	374	142	80	152	1,903	608	383	912
Histopathological subtype, n (%)								
Superficial spreading	23,139 (70.4)	6,669 (70.3)	4,151 (66.7)	12,319 (71.7)	1,956 (63.8)	1,489 (65.1)	270 (64.0)	197 (55.2)
Nodular	7,843 (23.8)	2,318 (24.4)	1,724 (27.7)	3,801 (22.1)	679 (22.1)	533 (23.3)	74 (17.5)	72 (20.2)
Lentigo maligna	1,305 (4.0)	354 (3.7)	208 (3.3)	743 (4.3)	256 (8.3)	169 (7.4)	49 (11.6)	38 (10.6)

Characteristic	Not missing (n=38,864)				Missing (n= 6,660)			
	Overall n=38,864	1983–1999 n=10,434	2000–2007 n=7,522	2008–2019 n=20,908	Overall n=6,660	1983–1999 n=3,714	2000–2007 n=1,204	2008–2019 n=1,742
Other	602 (1.8)	150 (1.6)	136 (2.2)	316 (1.8)	176 (5.7)	97 (4.2)	29 (6.9)	50 (14.0)
Unspecified	5,975	943	1,303	3,729	3,593	1,426	782	1,385
Ulceration¹, n (%)								
Absent	19,121 (80.8)		1,163 (50.3)	17,511 (83.8)	430 (91.3)		1 (100.0)	429 (91.3)
Present	4,544 (19.2)		1,147 (49.7)	3,397 (16.2)	41 (8.7)		0 (0.0)	41 (8.7)
Unspecified	15,199	9,987	5,212	0	6,189	3,714	1,203	1,272
Clinical stage								
Local	31,978 (93.1)	9,162 (95.0)	4,451 (91.9)	18,365 (92.5)	3,526 (69.7)	2,576 (80.7)	440 (57.4)	510 (46.3)
Regional metastasis	1,839 (5.4)	299 (3.1)	238 (4.9)	1,302 (6.6)	339 (6.7)	173 (5.4)	58 (7.6)	108 (9.8)
Distant metastasis	518 (1.5)	183 (1.9)	152 (3.1)	183 (0.9)	1,195 (23.6)	443 (13.9)	268 (35.0)	484 (43.9)
Unspecified	4,529	790	2,681	1,058	1,600	522	438	640

IQR: interquartile range

% does not include the unspecified cases

¹ Ulceration reported from year 2000

Table SIII. Number of melanoma cases (%) in each T category for all cases (including unspecified, model A), complete case (model B), imputed cases (model C), and all cases after imputation (model D), 1983–2019, n=45,524.

T category	Model A ^a		Model B ^b		Model C ^{c,e}		Model D ^{d,e}	
	n	%	n	%	n	%	n	%
Year of diagnosis: 1983–2019 (overall)								
T1 (≤1.0 mm)	20,041	44.0	20,041	51.6	2,529	38.0	22,570	49.6
T2 (>1.0–2.0 mm)	8,650	19.0	8,650	22.3	1,423	21.4	10,073	22.1
T3 (>2.0–4.0 mm)	5,888	12.9	5,888	15.2	1,333	20.0	7,221	15.9
T4 (>4.0 mm)	4,285	9.4	4,285	11.0	1,376	20.7	5,661	12.4
Unspecified	6,660	14.6						
Year of diagnosis: 1983–1999								
T1 (≤1.0 mm)	5,131	36.3	5,131	49.2	1,528	41.1	6,659	47.1
T2 (>1.0–2.0 mm)	2,382	16.8	2,382	22.8	821	22.1	3,203	22.6
T3 (>2.0–4.0 mm)	1,764	12.5	1,764	16.9	722	19.4	2,486	17.6
T4 (>4.0 mm)	1,157	8.2	1,157	11.1	644	17.3	1,801	12.7
Unspecified	3,714	26.3						
Year of diagnosis: 2000–2007								
T1 (≤1.0 mm)	3,579	41.0	3,579	47.6	437	36.3	4,016	46.0
T2 (>1.0–2.0 mm)	1,792	20.5	1,792	23.8	263	21.8	2,055	23.6
T3 (>2.0–4.0 mm)	1,264	14.5	1,264	16.8	248	20.6	1,512	17.3
T4 (>4.0 mm)	887	10.2	887	11.8	256	21.3	1,143	13.1
Unspecified	1,204	13.8						
Year of diagnosis: 2008–2019								
T1 (≤1.0 mm)	11,331	50.0	11,331	54.2	564	32.4	11,895	52.5
T2 (>1.0–2.0 mm)	4,476	19.8	4,476	21.4	340	19.5	4,816	21.3

T category	Model A ^a		Model B ^b		Model C ^{c,e}		Model D ^{d,e}	
	n	%	n	%	n	%	n	%
T3 (>2.0–4.0 mm)	2,860	12.6	2,860	13.7	363	20.8	3,223	14.2
T4 (>4.0 mm)	2,241	9.9	2,241	10.7	475	27.3	2,716	12.0
Unspecified	1,742	7.7						

^a All cases with unspecified included in the calculation of percentages (n=45,524, including 6,660 with unspecified thickness)

^b Complete case dataset (unspecified are excluded) (n=38,864)

^c Imputed cases. n in each cell is the number of cases averaged over the 30 imputed datasets (n=6,660)

^d All cases with unspecified tumour thickness imputed. n in each cell is the number of cases averaged over the 30 imputed datasets (n=45,524)

^e Multiple imputation performed separately for each time-period (1983-1999, 2000-2007, and 2008-2019) with 30 imputed datasets, using age at diagnosis, sex, vital status, survival time (≤ 1 , 1–5, 5–10, and >10 years from melanoma diagnosis to death, emigration, or 31 December 2019), residential region, anatomic site, clinical stage, subtype, and cumulative hazard rate of death (Nelson-Aalen estimator)

Table SIV. Number of melanoma cases (%) in each histopathological subtype for all cases (including unspecified, model A), complete case (model B), imputed cases (model C), and all cases after imputation (model D), 1983–2019, n=45,524.

Histopathological subtype	Model A ^a		Model B ^b		Model C ^{c,e}		Model D ^{d,e}	
	n	%	n	%	n	%	n	%
Year of diagnosis: 1983–2019 (overall)								
Superficial spreading	25,095	55.1	25,095	69.8	5,813	60.8	30,908	67.9
Nodular	8,522	18.7	8,522	23.7	2,947	30.8	11,469	25.2
Lentigo maligna	1,561	3.4	1,561	4.3	506	5.3	2,067	4.5
Other	778	1.7	778	2.2	302	3.2	1,080	2.4
Unspecified	9,568	21.0						
Year of diagnosis: 1983–1999								
Superficial spreading	8,158	57.7	8,158	69.3	1,336	56.4	9,494	67.1
Nodular	2,851	20.2	2,851	24.2	805	34.0	3,656	25.8
Lentigo maligna	523	3.7	523	4.4	150	6.3	673	4.8
Other	247	1.7	247	2.1	78	3.3	325	2.3
Unspecified	2,369	16.7						
Year of diagnosis: 2000–2007								
Superficial spreading	4,421	50.7	4,421	66.6	1,176	56.4	5,597	64.1
Nodular	1,798	20.6	1,798	27.1	734	35.2	2,532	29.0
Lentigo maligna	257	2.9	257	3.9	100	4.8	357	4.1
Other	165	1.9	165	2.5	76	3.6	241	2.8
Unspecified	2,085	23.9						
Year of diagnosis: 2008–2019								
Superficial spreading	12,516	55.3	12,516	71.4	3,302	64.6	15,818	69.8
Nodular	3,873	17.1	3,873	22.1	1,408	27.5	5,281	23.3

Histopathological subtype	Model A ^a		Model B ^b		Model C ^{c,e}		Model D ^{d,e}	
	n	%	n	%	n	%	n	%
Lentigo maligna	781	3.4	781	4.5	255	5.0	1,036	4.6
Other	366	1.6	366	2.1	149	2.9	515	2.3
Unspecified	5,114	22.6						

^a All cases with unspecified included in the calculation of percentages (n=45,524, including 9,568 with unspecified subtype)

^b Complete case dataset (unspecified are excluded) (n=35,956)

^c Imputed cases. n in each cell is the number of cases averaged over the 30 imputed datasets (n=9,568)

^d All cases with unspecified subtype imputed. n in each cell is the number of cases averaged over the 30 imputed datasets (n=45,524)

^e Multiple imputation performed separately for each time-period (1983-1999, 2000-2007, and 2008-2019) with 30 imputed datasets, using age at diagnosis, sex, vital status, survival time (≤ 1 , 1–5, 5–10, and >10 years from melanoma diagnosis to death, emigration, or 31 December 2019), residential region, anatomic site, clinical stage, tumour thickness, and cumulative hazard rate of death (Nelson-Aalen estimator)

Table SV. Annual percentage change (APC) and average annual percentage change (AAPC) with 95% confidence intervals (CI) of age-standardized melanoma incidence rates (multiple imputation analyses) by residential region, sex, and T category, 1983–2019, n=45,524.

	Period 1 ^a		Period 2 ^a		Period 3 ^a		Period 4 ^a		1983–2019
	APC (95% CI)	Years	APC (95% CI)	Years	APC (95% CI)	Years	APC (95% CI)	Years	AAPC (95% CI)
South-Eastern - Women (n=14,204)^b									
T1 (≤1.0 mm)	5.7 (2.7, 8.8)	1983–1991	-2.0 (-4.4, 0.4)	1992–2001	4.2 (3.2, 5.3)	2002–2019			2.8 (2.3, 3.3)
T2 (>1.0–2.0 mm)	0.4 (-0.5, 1.3)	1983–2002	2.7 (1.3, 4.1)	2003–2019					1.4 (1.0, 1.9)
T3 (>2.0–4.0 mm)	-1.8 (-3.4, -0.2)	1983–1997	1.1 (0.1, 2.2)	1998–2019					-0.1 (-0.6, 0.4)
T4 (>4.0 mm)	0.3 (-1.1, 1.8)	1983–1998	2.1 (0.9, 3.2)	1999–2019					1.3 (0.8, 1.8)
Western - Women (n= 2,969)^b									
T1 (≤1.0 mm)	2.2 (1.1, 3.4)	1983–2007	5.6 (1.3, 10.1)	2008–2019					3.2 (2.4, 4.1)
T2 (>1.0–2.0 mm)	-4.6 (-11.4, 2.8)	1983–1991	3.1 (1.4, 4.9)	1992–2019					1.1 (-0.1, 2.4)
T3 (>2.0–4.0 mm)	-1.0 (-4.0, 2.1)	1983–1998	2.1 (-0.4, 4.6)	1999–2019					0.7 (-0.3, 1.8)
T4 (>4.0 mm)	-5.6 (-12.4, 1.7)	1983–1990	3.3 (1.9, 4.7)	1991–2019					1.2 (0.1, 2.4)
Central - Women (n= 4,989)^b									
T1 (≤1.0 mm)	22.0 (7.2, 38.9)	1983–1985	0.5 (-0.7, 1.7)	1986–2004	4.8 (2.8, 6.8)	2005–2019			4.0 (3.2, 4.8)
T2 (>1.0–2.0 mm)	0.9 (-1.6, 3.5)	1983–1995	3.1 (1.9, 4.3)	1996–2019					2.3 (1.6, 3.0)
T3 (>2.0–4.0 mm)	-17.2 (-43.6, 21.6)	1983–1985	1.9 (0.9, 2.9)	1986–2019					0.2 (-1.2, 1.6)
T4 (>4.0 mm)	-8.3 (-15.9, -0.1)	1983–1989	2.5 (1.3, 3.8)	1990–2019					0.3 (-0.8, 1.4)
Northern - Women (n= 1,297)^b									
T1 (≤1.0 mm)	0.1 (-1.9, 2.2)	1983–1999	7.3 (5.3, 9.3)	2000–2019					3.9 (3.1, 4.6)
T2 (>1.0–2.0 mm)	-2.0 (-5.5, 1.6)	1983–1998	3.0 (0.2, 6.0)	1999–2019					0.7 (-0.5, 2.0)
T3 (>2.0–4.0 mm)	-1.4 (-4.3, 1.5)	1983–2010	2.4 (-13.1, 20.5)	2011–2019					-0.6 (-3.0, 1.8)
T4 (>4.0 mm)	-2.5 (-9.0, 4.5)	1983–1997	3.9 (-1.2, 9.1)	1998–2017					1.1 (-1.2, 3.4)
South-Eastern - Men (n=13,517)^b									
T1 (≤1.0 mm)	11.8 (8.1, 15.7)	1983–1990	-1.8 (-3.7, 0.2)	1991–2003	6.0 (4.4, 7.7)	2004–2019			4.4 (3.8, 5.0)

	Period 1 ^a		Period 2 ^a		Period 3 ^a		Period 4 ^a		1983–2019
	APC (95% CI)	Years	APC (95% CI)	Years	APC (95% CI)	Years	APC (95% CI)	Years	AAPC (95% CI)
T2 (>1.0–2.0 mm)	8.1 (3.1, 13.3)	1983–1988	-1.0 (-3.7, 1.7)	1989–1998	3.1 (2.1, 4.1)	1999–2019			2.7 (2.2, 3.3)
T3 (>2.0–4.0 mm)	4.1 (1.3, 7.1)	1983–1990	-2.2 (-6.1, 1.9)	1991–1998	3.5 (1.8, 5.1)	1999–2011	-2.3 (-5.5, 1.0)	2012–2019	1.2 (0.7, 1.7)
T4 (>4.0 mm)	7.5 (2.6, 12.7)	1983–1989	-1.5 (-5.2, 2.4)	1990–1997	2.1 (1.3, 3.0)	1998–2019			2.2 (1.7, 2.8)
Western - Men (n= 2,765)^b									
T1 (≤1.0 mm)	4.2 (2.6, 5.7)	1983–1999	-2.6 (-8.4, 3.6)	2000–2006	9.8 (6.9, 12.8)	2007–2019			4.7 (4.0, 5.3)
T2 (>1.0–2.0 mm)	2.6 (1.7, 3.5)	1983–2019							2.6 (1.7, 3.5)
T3 (>2.0–4.0 mm)	2.3 (0.5, 4.1)	1983–2004	-0.9 (-4.5, 2.9)	2005–2019					1.1 (0.1, 2.1)
T4 (>4.0 mm)	-3.1 (-8.4, 2.4)	1983–1993	2.5 (0.6, 4.4)	1994–2019					0.8 (-0.4, 2.0)
Central - Men (n= 4,475)^b									
T1 (≤1.0 mm)	11.0 (5.8, 16.4)	1983–1990	0.1 (-2.6, 2.8)	1991–2003	6.5 (4.2, 8.9)	2004–2019			5.2 (4.4, 6.0)
T2 (>1.0–2.0 mm)	13.1 (-5.6, 35.5)	1983–1985	3.0 (2.2, 3.7)	1986–2019					3.8 (2.8, 4.8)
T3 (>2.0–4.0 mm)	1.2 (-2.7, 5.2)	1983–1995	3.3 (1.4, 5.2)	1996–2019					2.5 (1.5, 3.6)
T4 (>4.0 mm)	2.5 (0.5, 4.6)	1983–2004	13.2 (-28.1, 78.2)	2005–2007	-2.1 (-7.9, 4.1)	2008–2019			1.9 (0.7, 3.1)
Northern - Men (n= 1,308)^b									
T1 (≤1.0 mm)	9.7 (5.7, 13.9)	1983–1994	-1.5 (-6.9, 4.1)	1995–2004	9.7 (6.1, 13.5)	2005–2019			6.5 (5.4, 7.5)
T2 (>1.0–2.0 mm)	2.3 (1.0, 3.6)	1983–2019							2.3 (1.0, 3.6)
T3 (>2.0–4.0 mm)	2.3 (0.8, 3.9)	1983–2019							2.3 (0.8, 3.9)
T4 (>4.0 mm)	-0.1 (-4.1, 4.0)	1983–2001	4.1 (-1.1, 9.6)	2002–2019					1.9 (0.1, 3.7)

^a Period refers to the segments separated by the joinpoints. The empty cells are due to the fewer joinpoints.

^b Average number of cases over 30 imputed data sets.

Table SVI. Annual percentage change (APC) and average annual percentage change (AAPC) with 95% confidence intervals (CI) of age-standardized melanoma incidence rates (multiple imputation analyses) by anatomic site, sex, and T category, 1983–2019, n=45,524.

	Period 1 ^a		Period 2 ^a		Period 3 ^a		Period 4 ^a		1983–2019
	APC (95% CI)	Years	APC (95% CI)	Years	APC (95% CI)	Years	APC (95% CI)	Years	AAPC (95% CI)
Head/neck - Women (n= 3,088)^b									
T1 (≤1.0 mm)	-2.3 (-9.6, 5.6)	1983–1989	1.7 (0.8, 2.6)	1990–2019					0.9 (0.1, 1.8)
T2 (>1.0–2.0 mm)	-2.8 (-5.5, 0.0)	1983–1995	1.6 (0.5, 2.8)	1996–2019					0.1 (-0.6, 0.7)
T3 (>2.0–4.0 mm)	-0.6 (-1.9, 0.6)	1983–2007	5.0 (0.4, 9.8)	2008–2019					1.1 (0.2, 1.9)
T4 (>4.0 mm)	-17.4 (-33.3, 2.3)	1983–1986	2.7 (1.4, 4.1)	1987–2019					0.3 (-1.2, 1.8)
Upper limbs - Women (n= 3,883)^b									
T1 (≤1.0 mm)	2.0 (1.2, 2.8)	1983–2006	4.9 (2.4, 7.4)	2007–2019					3.0 (2.4, 3.5)
T2 (>1.0–2.0 mm)	1.4 (0.6, 2.2)	1983–2012	8.6 (-1.1, 19.2)	2013–2019					2.6 (1.7, 3.4)
T3 (>2.0–4.0 mm)	-18.7 (-35.9, 3.2)	1983–1985	1.6 (0.7, 2.6)	1986–2019					-0.2 (-1.5, 1.1)
T4 (>4.0 mm)	-2.1 (-8.8, 5.1)	1983–1992	2.9 (1.0, 5.0)	1993–2019					1.5 (0.2, 2.9)
Trunk - Women (n= 8,049)^b									
T1 (≤1.0 mm)	5.2 (3.0, 7.4)	1983–1992	-0.2 (-2.2, 1.9)	1993–2004	6.2 (4.8, 7.6)	2005–2019			3.9 (3.4, 4.3)
T2 (>1.0–2.0 mm)	-0.3 (-3.0, 2.5)	1983–1992	3.1 (2.3, 3.9)	1993–2019					2.2 (1.6, 2.7)
T3 (>2.0–4.0 mm)	-1.1 (-2.8, 0.6)	1983–2001	6.8 (-0.3, 14.4)	2002–2009	-4.3 (-9.6, 1.4)	2010–2019			-0.1 (-1.0, 0.8)
T4 (>4.0 mm)	2.3 (1.2, 3.4)	1983–2009	-0.7 (-6.4, 5.4)	2010–2019					1.6 (0.7, 2.4)
Lower limbs - Women (n= 8,344)^b									
T1 (≤1.0 mm)	7.6 (3.6, 11.7)	1983–1990	-2.2 (-4.1, -0.2)	1991–2002	4.3 (3.0, 5.5)	2003–2019			2.8 (2.3, 3.3)
T2 (>1.0–2.0 mm)	0.4 (-0.8, 1.7)	1983–2003	2.0 (-0.2, 4.3)	2004–2019					1.1 (0.5, 1.7)
T3 (>2.0–4.0 mm)	-2.3 (-3.9, -0.6)	1983–1999	0.8 (-0.8, 2.3)	2000–2019					-0.7 (-1.3, -0.1)
T4 (>4.0 mm)	-1.6 (-3.0, -0.2)	1983–2003	3.6 (1.1, 6.2)	2004–2019					0.5 (-0.2, 1.3)
Head/neck - Men (n= 3,552)^b									
T1 (≤1.0 mm)	9.5 (3.7, 15.7)	1983–1991	-1.7 (-5.7, 2.4)	1992–2003	7.3 (4.2, 10.5)	2004–2019			4.8 (3.7, 5.8)

	Period 1 ^a		Period 2 ^a		Period 3 ^a		Period 4 ^a		1983–2019
	APC (95% CI)	Years	APC (95% CI)	Years	APC (95% CI)	Years	APC (95% CI)	Years	AAPC (95% CI)
T2 (>1.0–2.0 mm)	1.8 (1.0, 2.5)	1983–2010	2.4 (-2.6, 7.6)	2011–2019					1.9 (1.2, 2.5)
T3 (>2.0–4.0 mm)	4.2 (-1.7, 10.4)	1983–1989	-0.2 (-7.0, 7.1)	1990–1997	2.0 (0.8, 3.3)	1998–2019			2.0 (1.2, 2.7)
T4 (>4.0 mm)	6.7 (-2.4, 16.6)	1983–1987	2.1 (1.4, 2.9)	1988–2019					2.8 (2.0, 3.6)
Upper limbs - Men (n= 2,379)^b									
T1 (≤1.0 mm)	12.4 (4.6, 20.9)	1983–1989	0.9 (-1.6, 3.5)	1990–2006	8.1 (4.4, 11.9)	2007–2019			5.6 (4.5, 6.7)
T2 (>1.0–2.0 mm)	1.7 (-0.5, 3.9)	1983–2002	3.8 (0.4, 7.2)	2003–2019					2.6 (1.5, 3.7)
T3 (>2.0–4.0 mm)	2.2 (1.3, 3.2)	1983–2019							2.2 (1.3, 3.2)
T4 (>4.0 mm)	-1.5 (-13.4, 12.1)	1983–1988	2.9 (1.4, 4.4)	1989–2019					2.2 (0.7, 3.6)
Trunk - Men (n=13,051)^b									
T1 (≤1.0 mm)	10.7 (8.0, 13.4)	1983–1990	-0.9 (-1.9, 0.1)	1991–2006	15.0 (0.6, 31.4)	2007–2010	4.2 (1.7, 6.7)	2011–2019	4.4 (3.9, 4.9)
T2 (>1.0–2.0 mm)	8.1 (3.1, 13.2)	1983–1988	-0.5 (-2.8, 1.9)	1989–1999	3.8 (2.1, 5.5)	2000–2014	-1.5 (-8.9, 6.5)	2015–2019	2.5 (1.8, 3.2)
T3 (>2.0–4.0 mm)	1.6 (1.1, 2.1)	1983–2013	-2.8 (-10.8, 6.0)	2014–2019					1.0 (0.3, 1.6)
T4 (>4.0 mm)	0.7 (-0.4, 1.8)	1983–2004	13.9 (-8.8, 42.4)	2005–2007	-1.8 (-4.4, 0.8)	2008–2019			0.9 (0.4, 1.5)
Lower limbs - Men (n= 2,994)^b									
T1 (≤1.0 mm)	7.8 (4.1, 11.7)	1983–1994	-5.9 (-14.9, 4.0)	1995–1999	5.0 (3.2, 6.9)	2000–2019			4.2 (3.4, 5.0)
T2 (>1.0–2.0 mm)	6.2 (-1.8, 14.8)	1983–1988	2.5 (1.6, 3.4)	1989–2019					3.1 (2.3, 4.0)
T3 (>2.0–4.0 mm)	11.0 (2.1, 20.7)	1983–1989	-9.6 (-20.6, 2.8)	1990–1995	5.3 (2.3, 8.4)	1996–2011	-5.2 (-14.4, 5.0)	2012–2019	1.8 (0.4, 3.2)
T4 (>4.0 mm)	8.4 (-12.3, 34.1)	1983–1985	-2.0 (-4.1, 0.1)	1986–2004	19.5 (-3.4, 47.8)	2005–2007	-3.4 (-7.6, 1.1)	2008–2019	0.2 (-1.0, 1.5)

^a Period refers to the segments separated by the joinpoints. The empty cells are due to the fewer joinpoints.

^b Average number of cases over 30 imputed datasets.

Table SVII. Annual percentage change (APC) and average annual percentage change (AAPC) with 95% confidence intervals (CI) of age-standardized melanoma incidence rates (multiple imputation analyses) by subtype, sex, and T category, 1983–2019, n=45,524.

	Period 1 ^a		Period 2 ^a		Period 3 ^a		Period 4 ^a		1983–2019
	APC (95% CI)	Years	APC (95% CI)	Years	APC (95% CI)	Years	APC (95% CI)	Years	AAPC (95% CI)
Superficial spreading - Women (n=16,460)^b									
T1 (≤1.0 mm)	7.6 (4.8, 10.4)	1983–1989	-0.6 (-1.9, 0.6)	1990–2002	5.0 (4.0, 5.9)	2003–2019			3.4 (3.0, 3.8)
T2 (>1.0–2.0 mm)	-0.7 (-2.2, 0.8)	1983–1997	3.3 (2.3, 4.3)	1998–2019					1.6 (1.1, 2.1)
T3 (>2.0–4.0 mm)	-3.7 (-5.7, -1.6)	1983–1996	1.7 (0.5, 2.9)	1997–2019					-0.4 (-1.0, 0.2)
T4 (>4.0 mm)	0.7 (-0.1, 1.4)	1983–2019							0.7 (-0.1, 1.4)
Nodular - Women (n= 5,322)^b									
T1 (≤1.0 mm)	1.4 (0.7, 2.0)	1983–2015	-15.2 (-34.6, 10.0)	2016–2019					-0.1 (-1.1, 0.8)
T2 (>1.0–2.0 mm)	1.7 (1.0, 2.4)	1983–2011	-2.0 (-7.8, 4.0)	2012–2019					1.0 (0.3, 1.6)
T3 (>2.0–4.0 mm)	-0.0 (-1.2, 1.2)	1983–2003	7.8 (-3.7, 20.6)	2004–2008	-3.0 (-6.8, 0.8)	2009–2019			0.1 (-0.6, 0.8)
T4 (>4.0 mm)	-3.6 (-7.0, -0.1)	1983–1990	2.5 (1.8, 3.1)	1991–2019					1.1 (0.5, 1.6)
Lentigo maligna - Women (n= 1,135)^b									
T1 (≤1.0 mm)	-3.1 (-6.0, -0.2)	1983–1997	5.7 (3.6, 7.8)	1998–2019					1.9 (1.0, 2.9)
T2 (>1.0–2.0 mm)	-0.9 (-2.1, 0.3)	1983–2019							-0.9 (-2.1, 0.3)
T3 (>2.0–4.0 mm)	-8.6 (-17.5, 1.3)	1983–1990	1.6 (-0.3, 3.5)	1991–2019					-0.8 (-2.3, 0.8)
T4 (>4.0 mm)	-10.8 (-22.3, 2.3)	1983–1988	0.5 (-1.0, 2.1)	1989–2019					-1.5 (-3.0, -0.0)
Superficial spreading - Men (n=14,448)^b									
T1 (≤1.0 mm)	10.6 (7.7, 13.6)	1983–1991	-1.5 (-3.0, 0.1)	1992–2003	6.7 (5.4, 8.0)	2004–2019			4.7 (4.2, 5.2)
T2 (>1.0–2.0 mm)	6.7 (1.1, 12.5)	1983–1988	-0.3 (-1.9, 1.4)	1989–2001	4.4 (3.4, 5.5)	2002–2019			3.1 (2.5, 3.6)
T3 (>2.0–4.0 mm)	0.4 (-0.4, 1.2)	1983–2008	3.3 (-0.3, 6.9)	2009–2019					1.2 (0.6, 1.8)
T4 (>4.0 mm)	-1.4 (-4.0, 1.2)	1983–1994	1.8 (0.7, 2.8)	1995–2019					0.7 (0.1, 1.3)
Nodular - Men (n= 6,146)^b									
T1 (≤1.0 mm)	5.1 (2.9, 7.2)	1983–1999	0.2 (-1.7, 2.1)	2000–2019					2.5 (1.7, 3.2)

	Period 1 ^a		Period 2 ^a		Period 3 ^a		Period 4 ^a		1983–2019
	APC (95% CI)	Years	APC (95% CI)	Years	APC (95% CI)	Years	APC (95% CI)	Years	AAPC (95% CI)
T2 (>1.0–2.0 mm)	3.6 (2.3, 5.0)	1983–2003	-0.8 (-2.8, 1.2)	2004–2019					1.7 (1.1, 2.4)
T3 (>2.0–4.0 mm)	2.7 (2.0, 3.4)	1983–2011	-2.7 (-8.3, 3.2)	2012–2019					1.6 (1.0, 2.3)
T4 (>4.0 mm)	6.8 (1.6, 12.2)	1983–1988	-0.3 (-1.8, 1.3)	1989–2003	12.2 (-0.3, 26.2)	2004–2007	-1.3 (-3.8, 1.2)	2008–2019	1.9 (1.3, 2.5)
Lentigo maligna - Men (n= 932)^b									
T1 (≤1.0 mm)	2.4 (1.3, 3.5)	1983–2006	10.3 (6.7, 13.9)	2007–2019					4.8 (4.1, 5.6)
T2 (>1.0–2.0 mm)	-2.7 (-9.6, 4.7)	1983–1993	3.2 (0.7, 5.7)	1994–2019					1.3 (-0.2, 2.9)
T3 (>2.0–4.0 mm)	-13.2 (-29.6, 7.1)	1983–1986	0.7 (-0.6, 2.0)	1987–2019					-1.0 (-2.5, 0.5)
T4 (>4.0 mm)	0.4 (-0.6, 1.4)	1983-2019							0.4 (-0.6, 1.4)

^a Period refers to the segments separated by the joinpoints. The empty cells are due to the fewer joinpoints.

^b Average number of cases over 30 imputed datasets

Table SVIII. Proportions of melanoma cases by sex, T category, subtype, anatomic site, and period of diagnosis, complete case, 1983–2019, n=32,586^a.

	Head/neck			Upper limbs			Trunk			Lower limbs			Overall ^b
	1983–1999	2000–2007	2008–2019	1983–1999	2000–2007	2008–2019	1983–1999	2000–2007	2008–2019	1983–1999	2000–2007	2008–2019	1983–2019
Women													
T1, n	284	195	439	408	274	819	950	654	2047	1100	664	1720	9567
SSM, %	60.9	63.6	62.6	89.2	88.3	88.3	95.8	92.7	94.4	93.8	90.7	93.6	89.9
NM, %	4.9	3.6	1.4	7.1	8.4	4.8	3.9	6.6	3.0	4.6	6.3	3.3	4.3
LMM, %	33.8	32.8	36.0	2.9	3.3	6.7	0.3	0.6	2.2	0.7	1.2	1.8	5.2
Other, %	0.4	0.0	0.0	0.7	0.0	0.2	0.0	0.2	0.4	0.8	1.8	1.3	0.7
T2, n	140	78	178	193	139	335	311	213	616	470	301	653	3645
SSM, %	35.7	57.7	59.0	64.8	62.6	66.3	71.4	67.1	73.1	73.4	69.8	73.4	68.3
NM, %	28.6	20.5	16.3	30.1	33.1	30.4	27.7	30.5	26.1	23.2	26.6	23.0	25.8
LMM, %	34.3	20.5	21.9	2.6	0.7	2.1	0.3	1.9	0.3	0.6	0.7	0.8	3.7
Other, %	1.4	1.3	2.8	2.6	3.6	1.2	0.6	0.5	0.5	2.8	3.0	2.9	2.1
T3, n	130	64	174	124	97	183	215	127	299	310	139	306	2174
SSM, %	30.0	28.1	28.2	30.6	21.6	28.4	47.0	31.5	41.1	46.8	45.3	44.1	37.9
NM, %	46.2	50.0	52.3	66.9	74.2	66.7	52.6	66.9	56.2	46.5	51.8	52.0	55.3
LMM, %	22.3	14.1	15.5	1.6	0.0	1.1	0.0	0.0	1.3	0.3	0.0	0.0	3.4
Other, %	1.5	7.8	4.0	0.8	4.1	3.8	0.5	1.6	1.3	6.5	2.9	3.9	3.4
T4, n	86	64	167	78	66	141	107	98	225	141	77	221	1486
SSM, %	11.6	18.8	17.4	20.5	19.7	14.9	27.1	15.3	22.7	34.8	37.7	21.3	21.8
NM, %	67.4	64.1	65.3	70.5	72.7	77.3	72.0	79.6	73.8	57.4	57.1	71.5	69.3
LMM, %	14.0	4.7	8.4	1.3	0.0	2.1	0.0	0.0	0.0	2.1	0.0	0.0	2.4
Other, %	7.0	12.5	9.0	7.7	7.6	5.7	0.9	5.1	3.6	5.7	5.2	7.2	6.5
Men													
T1, n	207	141	524	185	135	480	1293	817	2820	256	175	523	7566

	Head/neck			Upper limbs			Trunk			Lower limbs			Overall ^b
	1983–1999	2000–2007	2008–2019	1983–1999	2000–2007	2008–2019	1983–1999	2000–2007	2008–2019	1983–1999	2000–2007	2008–2019	1983–2019
SSM, %	74.9	64.5	65.3	91.9	89.6	91.7	93.0	91.6	93.7	93.4	90.3	93.9	89.9
NM, %	3.4	7.1	3.1	4.9	6.7	4.6	5.0	6.5	3.0	5.9	4.6	3.4	4.2
LMM, %	21.3	28.4	31.3	3.2	2.2	3.5	1.8	1.6	3.0	0.4	1.7	1.3	5.4
Other, %	0.5	0.0	0.4	0.0	1.5	0.2	0.2	0.4	0.2	0.4	3.4	1.3	0.5
T2, n	148	98	242	111	61	197	587	427	1136	127	89	249	3476
SSM, %	52.7	52.0	59.5	64.0	63.9	69.0	72.1	66.0	76.3	70.1	61.8	77.5	69.9
NM, %	35.8	29.6	26.0	33.3	32.8	27.9	26.7	31.4	22.4	25.2	36.0	18.5	26.2
LMM, %	10.8	14.3	12.8	0.9	1.6	1.5	0.5	0.9	1.0	0.8	0.0	0.4	2.5
Other, %	0.7	4.1	1.7	1.8	1.6	1.5	0.7	1.6	0.4	3.9	2.2	3.6	1.4
T3, n	150	92	248	75	65	149	477	331	729	103	79	176	2687
SSM, %	30.0	28.3	26.6	40.0	32.3	31.5	47.6	40.5	37.0	35.9	38.0	41.5	37.6
NM, %	53.3	58.7	60.5	54.7	64.6	65.1	51.2	58.0	60.4	52.4	55.7	52.3	57.1
LMM, %	14.7	7.6	6.9	1.3	0.0	1.3	0.4	0.0	0.1	0.0	0.0	0.0	1.9
Other, %	2.0	5.4	6.0	4.0	3.1	2.0	0.8	1.5	2.5	11.7	6.3	6.2	3.5
T4, n	123	86	243	47	40	120	318	208	519	88	46	128	1985
SSM, %	15.4	17.4	18.1	31.9	17.5	17.5	29.6	21.6	20.4	23.9	23.9	23.4	21.9
NM, %	78.9	73.3	69.1	63.8	80.0	77.5	68.6	74.5	75.5	64.8	67.4	64.8	71.9
LMM, %	2.4	2.3	2.1	0.0	0.0	0.0	0.0	0.5	0.2	0.0	0.0	0.0	0.6
Other, %	3.3	7.0	10.7	4.3	2.5	5.0	1.9	3.4	3.9	11.4	8.7	11.7	5.6

SSM: Superficial spreading melanoma, NM: Nodular melanoma, LMM: Lentigo maligna melanoma

T1: ≤1.0 mm; T2: >1.0–2 mm.0; T3: >2.0–4.0 mm; T4: >4.0 mm

^a Cases with no missing in T category, subtype, and anatomic site

^b The Overall column includes the 'Other' category of anatomic site.