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**Table SI** Complete-case hazard ratios (HRs) with 95 confidence intervals (CIs) for melanoma-specific death in incident melanoma cases in the Norwegian Women and Cancer cohort (1991–2018) by tumor thickness in women with tumors >1 mm.

Variable	Intermediate thickness (>1.0–2.0 mm)			Thick (>2.0 mm)		
	No. of participants (n=371)	Melanoma deaths (n=39)	HR (95% CI) <sup>a</sup>	No. of participants (n=281)	Melanoma deaths (n=73)	HR (95% CI) <sup>a</sup>
<b>Hair color</b>						
Red	34	3	0.89 (0.24–3.26)	19	4	0.99 (0.34–2.94)
Blonde/yellow	145	14	1	147	33	1
Brown	109	12	1.16 (0.52–2.61)	73	17	1.11 (0.61–2.04)
Black/dark brown	39	3	0.74 (0.21–2.65)	32	9	1.23 (0.58–2.61)
<b>Eye color</b>						
Blue	163	13	1	142	30	1
Grey/green/mixed	136	15	1.49 (0.69–3.20)	101	24	1.28 (0.73–2.25)
Brown	26	4	1.63 (0.52–5.13)	24	9	1.96 (0.90–4.27)
<b>Skin color</b>						
Light	133	14	1	103	18	1
Medium	109	5	0.42 (0.15–1.18)	77	27	2.46 (1.34–4.52)
Darker	45	7	1.60 (0.61–4.18)	38	6	1.16 (0.43–3.12)
<b>Freckling when sunbathing</b>						
Yes	133	11	1	106	22	1
No	158	17	1.05 (0.47–2.34)	129	30	1.12 (0.64–1.99)
<b>Pigmentary score</b>						
Fair	85	8	1	67	15	1
Medium/darker	178	18	1.10 (0.47–2.59)	134	31	1.22 (0.65–2.30)
<b>Skin reaction to acute sun exposure<sup>c</sup></b>						
Red <sup>d</sup>	192	16	1	168	39	1
Brown	32	4	0.88 (0.26–2.94)	32	15	2.59 (1.37–4.89)
<b>Skin reaction to chronic sun exposure<sup>c</sup></b>						
Light brown/never brown	76	8	1	80	21	1
Brown/deep brown	131	8	0.62 (0.21–1.82)	107	28	0.89 (0.49–1.64)
<b>Asymmetrical nevi &gt;5 mm on arms/legs</b>						

0	218	21	1	185	46	1
≥1	82	8	0.97 (0.41–2.26) <sup>b</sup>	66	14	0.87 (0.47–1.61) <sup>b</sup>
<b>Small symmetrical nevi on arms/legs<sup>c</sup></b>						
≤10	71	6	1	55	16	1
>10	101	6	0.61 (0.13–2.91) <sup>b</sup>	93	21	0.66 (0.32–1.33) <sup>b</sup>

**Table SII** Hazard ratios (HRs) with 95 confidence intervals (CIs) for melanoma-specific death in incident melanoma cases in the Norwegian Women and Cancer cohort (1991–2018) in women with tumors ≤1 mm

≤1.0 mm				
Complete-case analysis				Multiple imputation analysis <sup>c</sup>
Variable	No. of participants (n=1103)	Melanoma deaths (n=20)	HR (95% CI) <sup>a</sup>	HR (95% CI) <sup>a</sup>
<b>Hair color</b>				
Red	81	1	0.79 (0.10–6.63)	0.54 (0.07–4.14)
Blonde/yellow	484	10	1	1
Brown	320	3	0.51 (0.14–1.90)	0.81 (0.29–2.24)
Black/dark brown	100	3	1.64 (0.43–6.46)	1.29 (0.35–4.20)
<b>Eye color</b>				
Blue	522	8	1	1
Grey/green/mixed	366	7	1.31 (0.47–3.65)	1.15 (0.48–2.74)
Brown	96	2	1.72 (0.35–8.41)	1.18 (0.27–5.16)
<b>Skin color</b>				
Light	398	6	1	1
Medium	318	6	1.35 (0.43–4.27)	1.64 (0.59–4.57)
Darker	153	2	0.83 (0.16–4.25)	1.38 (0.38–5.05)
<b>Freckling when sunbathing</b>				
Yes	399	7	1	1
No	490	8	0.86 (0.31–2.42)	0.91 (0.39–2.12)
<b>Pigmentary score</b>				
Fair	269	7	1	1

Medium/darker	535	6	0.46 (0.15–1.39)	0.96 (0.33–2.46)
<b>Skin reaction to acute sun exposure<sup>c</sup></b>				
Red <sup>d</sup>	536	10	1	1
Brown	104	2	1.09 (0.23–5.20)	1.06 (0.31–3.58)
<b>Skin reaction to chronic sun exposure<sup>c</sup></b>				
Light brown/never brown	223	4	1	1
Brown/ deep brown	372	7	1.13 (0.32–3.94)	1.12 (0.42–3.01)
<b>Asymmetrical nevi &gt;5 mm on arms/legs</b>				
0	669	10	1	1
≥1	240	5	1.08 (0.36– 3.29) <sup>b</sup>	1.46 (0.61– 3.51) <sup>b</sup>
<b>Small symmetrical nevi on arms/legs<sup>c</sup></b>				
≤10	202	5	1	1
>10	306	5	0.45 (0.12–1.75) b	0.58 (0.21–1.63) b

<sup>a</sup> Cox proportional hazards regression stratified by birth cohort, and with time since diagnosis as time scale adjusting for age at diagnosis, region of residence, and education

<sup>b</sup> Cox proportional hazards regression stratified by birth cohort, and with time since diagnosis as time scale adjusting for age at diagnosis, region of residence, education, and hair color.

<sup>c</sup> Recorded for subsamples of the cohort

<sup>d</sup> Red with burning and blistering and red

<sup>e</sup> Analysis with multiple imputation of missing data conducted using chained equations and a total of 40 imputed data sets, with the same adjustments as the multivariable model (average n = 1170, range: 1161–1179; average 27 deaths, range: 23–30).

**Table SIII** Complete case hazard ratios (HRs) with 95% confidence intervals (CIs) for melanoma-specific death in incident melanoma cases in the Norwegian Women and Cancer cohort (1991–2018) by subtype in women with tumors >1 mm.

Variable	Superficial spreading (>1.0 mm)			Nodular (>1.0 mm)		
	No. of participants (n=272)	Melanoma deaths (n=32)	HR (95% CI) <sup>a</sup>	No. of participants (n=226)	Melanoma deaths (n=34)	HR (95% CI) <sup>a</sup>
<b>Hair color</b>						
Red/blonde/yellow	133	13	1	110	16	1
Brown/dark	106	12	1.16 (0.51–2.62)	87	13	1.13 (0.51–2.47)
<b>Eye color</b>						
Blue	114	9	1	103	16	1
Grey/green/mixed/brown	122	16	1.64 (0.70–3.89)	91	13	1.05 (0.50–2.25)
<b>Skin color</b>						
Light	98	9	1	76	7	1
Medium/darker	102	12	1.25 (0.49–3.16)	87	14	2.29 (0.86–6.12)
<b>Hair color</b>						
Red/blonde/yellow	92	7	1	75	11	1
Brown/dark	109	14	1.47 (0.57–3.84)	104	13	0.79 (0.34–1.84)
<b>Eye color</b>						
Blue	63	4	1	49	6	1
Grey/green/mixed/brown	119	14	1.71 (0.16–2.94)	102	14	1.67 (0.58–4.85)
<b>Skin reaction to acute sun exposure<sup>c</sup></b>						
Red <sup>d</sup>	144	17	1	115	18	1
Brown	21	3	1.19 (0.32–4.41)	27	7	2.09 (0.78–5.62)
<b>Skin reaction to chronic sun exposure<sup>c</sup></b>						
Light brown/never brown	53	10	1	57	8	1
Brown/deep brown	100	6	0.18 (0.05–0.55)	74	14	1.91 (0.70–5.19)
<b>Asymmetrical nevi &gt;5 mm on arms/legs</b>						
0	160	17	1	128	19	1
≥1	64	6	0.86 (0.33–2.27) <sup>b</sup>	50	9	1.33 (0.55–3.21) <sup>b</sup>
<b>Small symmetrical</b>						

nevi on arms/legs <sup>c</sup>						
≤10	47	6	1	44	8	1
>10	71	4	0.75 (0.15–3.80) <sup>b</sup>	69	10	1.31 (0.49–3.72) <sup>b</sup>

<sup>a</sup>Cox proportional hazards regression stratified by birth cohort, and with time since diagnosis as time scale adjusting for age at diagnosis, region of residence, and education

<sup>b</sup>Cox proportional hazards regression stratified by birth cohort, and with time since diagnosis as time scale adjusting for age at diagnosis, region of residence, education, and hair color.

<sup>c</sup>Recorded for subsamples of the cohort.

<sup>d</sup>Red with burning and blistering and red.

<sup>e</sup>Analysis with multiple imputation of missing data conducted using chained equations and a total of 40 imputed data sets, with the same adjustments as the multivariable model (average n = 282, range: 277–287; average 33 deaths, range: 32–33).

<sup>f</sup>Analysis with multiple imputation of missing data conducted using chained equations and a total of 40 imputed data sets, with the same adjustments as the multivariable model (average n = 231, range: 230–232; average 37 deaths, range: 35–37).

**Table SIV.** Complete case hazard ratios (HRs) with 95% confidence intervals (CIs) for pigmented characteristics and melanoma-specific death, stratified by number of large asymmetrical nevi, incident melanoma cases in the Norwegian Women and Cancer cohort (1991–2018) in women with tumors >1 mm

Variable	0 asymmetrical nevi >5 mm (>1 mm)			≥1 asymmetrical nevi >5 mm (>1 mm)		
	No. of participants (n=421)	Melanoma deaths (n=80)	HR (95% CI) <sup>a</sup>	No. of participants (n=155)	Melanoma deaths (n=23)	HR (95% CI) <sup>a</sup>
<b>Hair color</b>						
Red/blonde/yellow	227	39	1	93	11	1
Brown/dark brown/black	176	28	0.95 (0.58–1.56)	55	11	1.56 (0.62–3.96)
<b>Eye color</b>						
Blue	209	32	1	74	9	1
Grey/green/mixed/brown	191	35	1.24 (0.75–2.04)	73	13	1.57 (0.60–4.16)
<b>Skin color</b>						
Light	147	22	1	66	6	1
Medium/darker	196	31	1.13 (0.65–1.98)	49	11	3.08 (1.06–8.90)
<b>Freckling when sunbathing</b>						
Yes	149	23	1	72	10	1

No	201	34	1.13 (0.66–1.95)	56	7	0.75 (0.27–2.04)
<b>Pigmentary score</b>						
Fair	93	18	1	48	4	1
Medium/darker	230	33	0.84 (0.47–1.51)	63	12	2.96 (0.84–10.44)
<b>Skin reaction to acute sun exposure<sup>b</sup></b>						
Red <sup>c</sup>	239	38	1	94	11	1
Brown	47	14	1.88 (1.00–3.55)	10	4	7.34 (1.50–35.42)
<b>Skin reaction to chronic sun exposure<sup>b</sup></b>						
Light brown/never brown	103	18	1	41	7	1
Brown/deep brown	165	27	0.87 (0.47–1.64)	57	7	0.65 (0.19–2.21)

<sup>a</sup> Cox proportional hazards regression stratified by birth cohort, and with time since diagnosis as time scale adjusting for age at diagnosis, region of residence, and education

<sup>b</sup> Recorded for subsamples of the cohort

<sup>c</sup> Red with burning and blistering and red

<sup>d</sup> Analysis with multiple imputation of missing data conducted using chained equations and a total of 40 imputed data sets, with the same adjustments as the multivariable model (average n = 539, range: 528–549; average 103 deaths, range: 99–110)

<sup>e</sup> Analysis with multiple imputation of missing data conducted using chained equations and a total of 40 imputed data sets, with the same adjustments as the multivariable model (average n = 193, range: 184–200; average 30 deaths, range: 26–36).

**Table SV.** Hazard ratios (HRs) with 95 confidence intervals (CIs) for melanoma-specific death in incident melanoma cases in the Norwegian Women and Cancer cohort (1991–2018) by tumor thickness in women with tumors >1 mm

Variable	Intermediate thickness (>1.0–2.0 mm)					Thick (>2.0 mm)				
	No. of participants (n=371)	Melanoma deaths (n=39)	Model 0 <sup>a</sup>	Model 1 <sup>b</sup>	Model 2 <sup>c</sup>	No. of participants (n=281)	Melanoma deaths (n=73)	Model 0 <sup>a</sup>	Model 1 <sup>b</sup>	Model 2 <sup>c</sup>
<b>Hair color</b>										
Red	34	3	0.90 (0.28–2.93)	0.85 (0.42–1.73)	1.06 (0.31–3.65)	19	4	0.99 (0.35–2.82)	0.98 (0.33–2.91)	0.96 (0.32–2.82)
Blonde/yellow	145	14	1	1	1	147	33	1	1	1
Brown	109	12	1.38 (0.69–2.74)	1.08 (0.74–1.57)	1.69 (0.77–3.73)	73	17	1.26 (0.74–2.16)	1.26 (0.73–2.18)	1.28 (0.73–2.25)
Black/dark brown	39	3	0.89 (0.32–2.54)	1.23 (0.76–1.99)	0.96 (0.32–2.93)	32	9	1.21 (0.63–2.33)	1.20 (0.62–2.33)	0.97 (0.48–1.99)
<b>Eye color</b>										
Blue	163	13	1	1	1	142	30	1	1	1
Grey/green/mixed	136	15	1.21 (0.63–2.33)	1.29 (0.66–2.51)	1.29 (0.64–2.64)	101	24	1.30 (0.79–2.14)	1.33 (0.80–2.21)	1.41 (0.83–2.21)
Brown	26	4	1.16 (0.41–3.06)	1.10 (0.38–3.17)	1.09 (0.34–3.50)	24	9	1.92 (0.98–3.77)	1.98 (0.99–3.96)	2.14 (1.02–4.50)
<b>Skin color</b>										
Light	133	14	1	1	1	103	18	1	1	1

Medium	109	5	0.62 (0.28– 1.39)	0.65 (0.29– 1.47)	0.65 (0.27–1.57)	77	27	1.69 (1.99– 4.52)	1.75 (1.01– 3.06)	1.60 (0.90– 2.84)
Darker	45	7	1.13 (0.50– 2.54)	1.18 (0.51– 2.72)	1.32 (0.54–3.18)	38	6	1.10 (0.50– 3.12)	1.11 (0.49– 2.51)	1.34 (0.57– 3.15)
<b>Freckling when sunbathing</b>										
Yes	133	11	1	1	1	106	22	1	1	1
No	158	17	1.14 (0.58– 2.22)	1.06 (0.53– 2.12)	1.24 (0.60–2.57)	129	30	1.02 (0.63– 1.66)	1.02 (0.62– 1.67)	1.17 (0.69– 1.99)
<b>Pigmentary score</b>										
Fair	85	8	1	1	1	67	15	1	1	1
Medium/darker	178	18	1.07 (0.52– 2.21)	1.12 (0.54– 2.33)	1.24 (0.56–2.73)	134	31	1.23 (0.65– 2.07)	1.25 (0.74– 2.13)	1.34 (0.78– 2.31)
<b>Skin reaction to acute sun exposure<sup>e</sup></b>										
Red <sup>f</sup>	192	16	1	1	1	168	39	1	1	1
Brown	32	4	1.46 (0.68– 3.15)	1.49 (0.68– 3.26)	1.52 (0.65–3.56)	32	15	1.47 (1.81– 2.68)	1.54 (0.83– 2.88)	1.71 (0.90– 3.24)
<b>Skin reaction to chronic sun exposure<sup>e</sup></b>										
Light brown/never brown	76	8	1	1	1	80	21	1	1	1
Brown/ deep brown	131	8	0.91 (0.43– 1.92)	0.88 (0.40– 1.94)	0.96 (0.41–2.24)	107	28	0.86 (0.53– 1.40)	0.91 (0.55– 1.49)	0.75 (0.45– 1.27)



<b>Asymmetrical nevi &gt;5 mm on arms/legs</b>										
0	218	21	1	1	1	185	46	1	1	1
≥1	82	8	0.76 (0.35– 1.64)	0.74 (0.34– 1.59) <sup>d</sup>	0.92 (0.42–2.02) <sup>d</sup>	66	14	0.78 (0.45– 1.35)	0.79 (0.45– 1.38) <sup>d</sup>	0.80 (0.44– 1.45) <sup>d</sup>
<b>Small symmetrical nevi on arms/legs<sup>e</sup></b>										
≤10	71	6	1	1	1	55	16	1	1	1
>10	101	6	0.79 (0.37– 1.69)	0.80 (0.35– 1.81) <sup>d</sup>	0.90 (0.38–2.14) <sup>d</sup>	93	21	0.84 (0.49– 1.42)	0.80 (0.46– 1.40) <sup>d</sup>	0.96 (0.54– 1.72) <sup>d</sup>

<sup>a</sup> Cox proportional hazards regression stratified by birth cohort, and with time since diagnosis as time scale

<sup>b</sup> Cox proportional hazards regression stratified by birth cohort, and with time since diagnosis as time scale adjusting for age at diagnosis, region of residence, and education

<sup>c</sup> Cox proportional hazards regression stratified by birth cohort, and with time since diagnosis as time scale adjusting for age at diagnosis, region of residence, education, anatomic site, histological subtype, and clinical stage.

<sup>d</sup> Additional adjustment for hair color.

<sup>e</sup> Recorded for subsamples of the cohort

<sup>f</sup> Red with burning and blistering and red