## oSuppl. Table 2: The MelanoQ Questionnaire

	VARIABLE	DATA CODING	COMMENTS						
	SECTION A								
	I. GENERAL (completed by physician/study nurse)								
1.	Subject	Case or control	Separate questionnaires for cases and controls						
2.	Database code number	Use numeric coding system. First 2 numbers= country; second 2 numbers= center; M or C (melanoma case or control subject, respectively); last 4 numbers= consecutive case/control number	Center-specific code can be added						
3.	3. Date of questionnaire administration and phenotyping	DD/MMM/YYYY	Use a 3-letter abbreviation for month to avoid misinterpretation (US vs. European style)						
4.	Dates of updated questionnaire and/or phenotyping	For each update, specify DD/MMM/YYYY and items updated (with corresponding section numbers in questionnaire)							
5.	Type of melanoma (if subject is a melanoma case): sporadic or familial (the latter defined as ≥2 affected individuals, with <i>in situ</i> or invasive melanoma in 1 <sup>st</sup> to 3 <sup>rd</sup> degree relatives)*	Sporadic: Familial*: Don't know: Other (complex family history), specify:  *Provide details in section C, item #14	Note: our definition of "familial melanoma" applies to low incidence geographic regions, such as the Mediterranean basin. A different definition would apply to other regions  *If there is no intention for genetic studies then a family history limited to 1st degree relatives is adequate but number of affected members in the larger family should be recorded.						
	II. DEMOGRAPHIC (complete	ed by case/control)							
6.	Sex	M/F (defined at birth)							

7.	Date and place of birth	DD/MMM/YYYY, or 15/MMM/YYYY (if day is not known), or 15/JUN/YYYY (if day and month are not known), or UNK if data is completely unknown  Place: city, province, country	UNK stands for "unknown date of birth"
8.	Weight and height	Weight (Kg): Height (cm):	Last time checked within 12 months
9.	Ethnicity	<ol> <li>White         <ul> <li>a. Europe</li> <li>b. North Africa</li> <li>c. Middle East</li> <li>d. Jewish ancestry</li> </ul> </li> <li>Black or African American</li> <li>Asian</li> <li>Hispanic or Latino (i.e. from South or Central America)</li> <li>Other (specify)</li> </ol>	View <b>Appendix A</b> .
10.	Residency	Record all places where the case/control has resided for >6 months Specify exact location (country, city/town) and time (from YYYY to YYYY)	Geocoding is advisable
11.	Education	Three categories: a. Up to junior high school (up to 14-16 yrs) b. High school (up to 18-19 yrs) c. University	
12.	Current occupational status	Five categories:  a. Employed b. Working at home e. Retired c. Unemployed	
13.	History of occupation (optional)	History of occupation (starting from most recent and going backwards in time; record duration from YYYY to YYYY)	Minimum period of occupation: 1 yr  May use SIC/SOC coding (https://siccode.com/en/)

## **SECTION B**

## I. PHENOTYPE (completed by case/control)

	i. FillNOTTFL (completed i		
1.	Skin type	Answer to the following 2 questions and classify skin type according to Suppl. Figure 1:  1. Which of the following sentences does better describe your skin response to sun exposure at noon for 30 minutes in the first days of the summer without sunscreen/clothing protection?  a) Not burn  b) Burns lightly  c) Burns moderately  d) Burns severely  2. Does your skin tan after a prolonged and repeated sun exposure (e.g. after several days as at the end of the summer) without protecting it with sunscreen or clothing?  A. No tan  B. Tans lightly  C. Tans moderately  D. Tans deeply	The table can be applied after receiving the answers from the participant  Please refer also to tanning ability chart (Suppl. Figure 1)
2.	Eye color	Three categories: a. Light (green, blue, gray) b. Medium (light brown, hazel) c. Dark (dark brown, black)	Eye color chart (Suppl. Figure 2)
3.	Hair color (at age of 18 yrs)	Five categories:  a. Red b. Blonde c. Light brown  d. Dark brown e. Black	Hair color chart (Suppl. Figure 3)
4.	Freckles Definition: Light brown small macules since childhood, on the face, during summer time (disappear in winter)	None/Few/Some/Many	Freckle density chart (Suppl. Figure 4) from Reference 25

5.	Nevi in childhood/adolescence (i.e., age of 18 yrs)	None/Few/Some/Many	Nevus density chart (Suppl. Figure 5)			
	II. HISTORY OF ULTRAVIOLET EXPOSURE (completed by case/control)					
6.	Occupational sun exposure (i.e. outdoor occupation with at least 4 hours/day spent outdoor in the sun)	YES/NO  If YES, specify the occupation:  How many hours/day?  How many days/month?  How many months/year?  How many years?	See <b>Appendix B</b> . for examples of occupations with continuous sun exposure			
7.	Recreational sun exposure (i.e. outdoor hobbies or physical activities–other than sunbathing–with at least 4 hours/day spent outdoor in the sun)	YES/NO  If YES, specify which activity:  How many hours/day? How many days/month? How many months/year? How many years?	See <b>Appendix</b> <i>C.</i> for examples of outdoor recreational activities			
8.	Intermittent sun exposure (i.e. sun exposure in spring and summer time, including vacation, during peak hours–11AM-4PM)	Age period    Weeks of vacation   Hours spent between 11AM and 4PM				

9.	Most recent intense intermittent sun exposure	Provide date or month of last ti melanoma (fo	diagnosis of			
10.	Severe sunburns (Grade 2), lifetime before diagnosis.  Definition: suburns with erythema and pain for more than 2 days or with blisters (no matter for how long)	At age <18 yrs: YES/NO/Not known If YES, number:  At age ≥18 yrs: YES/NO/Not known If YES, number:  At site of melanoma? YES/NO/Not known In the last 5 yrs: YES/NO/Not known If YES, number:				
11.	Sunscreen use (summer time)	Age period  Childhood (up to age 10 yrs) Adolescence (11-18 yrs) Adulthood (≥18 yrs) 10 years before melanoma diagnosis (for cases) or last 10 yrs (for controls)	Sunscree Did you use sunscreens during the summertime? - Never - <50% of time exposure - >50% of time exposure - Always - Not known	n use Type of sunscreen used: - SPF<20 - SPF>20 - Not known		Answers to the questions related to the sunscreen use should be provided for each of the specified time periods'
12.	Sun protection other than sunscreen use (summertime over the last 10 yrs) (Optional)	Did you use a hat?  - Never  - <50% of time exposure  - >50% of time exposure  - Always  - Not known  Did you use protective clothing?  - Never  - <50% of time exposure  - >50% of time exposure				

		<ul> <li>Always</li> <li>Not known</li> <li>Did you seek the shade or stay indoors during peak UVR hours?</li> <li>Rarely</li> <li>Sometimes</li> <li>Always</li> <li>Not known</li> </ul>
13.	Sunlamps/sunbeds	YES/NO  If YES:  - Lifetime number of sessions:  - Age at first exposure:  - Age at last exposure:
14.	Phototherapy (UVB-PUVA) (Optional)	Ever/Never Ever/Never
	III. LIFESTYLE HABITS (comp	pleted by case/control)
15.	Smoking	a. Never b. Former smoker (quit one year before diagnosis or earlier) c. Current smoker  If b. or c.:  - age when you started smoking: how long have you been smoking (years): - how much did/do you typically smoke:

16.	Have you received vitamin pills during the last year? (Optional)	If YES:  - Never  - 1-3 days  - 1-6 days  - Everyda	/week /week	ΥE	ES/NO		
17.	What type of vitamins did you receive and how often? (Optional)	β-carotene -Never -1-3 days/month -1-3 days/week -4-6 days/week -Everyday	Vitamin A -Never -1-3 days/month -1-3 days/week -4-6 days/week -Everyday	Vitamin C -Never -1-3 days/month -1-3 days/week -4-6 days/week -Everyday	Vitamin E -Never -1-3 days/month -1-3 days/week -4-6 days/week -Everyday	Vitamin D -Never -1-3 days/month -1-3 days/week -4-6 days/week -Everyday	Multivitamins -Never -1-3 days/month -1-3 days/week -4-6 days/week -Everyday

Section B Completion Evaluation Questions  - All questions Were you able to respond to the  Most questions	- All questions  Mest questions	18.	For how long did you receive vitamins? (Optional)	β-carotene -<1 yr -1-4 yrs -5-9 yrs -≥10 yrs	Vitamin A -<1 yr -1-4 yrs -5-9 yrs -≥10 yrs	Vitamin C -<1 yr -1-4 yrs -5-9 yrs -≥10 yrs	Vitamin E -<1 yr -1-4 yrs -5-9 yrs -≥10 yrs	Vitamin D -<1 yr -1-4 yrs -5-9 yrs -≥10 yrs	Multivitamins -<1 yr -1-4 yrs -5-9 yrs -≥10 yrs	
		Section 19.								

## **SECTION C**

I. CLINICAL EXAMINATION (completed by physician/study nurse)

1.	Solar Lentigines Definition: permanent multiple macular pigmented lesions, aggregated, in areas of chronic sun exposure, do not disappear in winter	Record according to severity: - None - Few - Many  At site of melanoma (i.e. area around the YES/NO	site w/ a 20 c		
		Consider nevi >2 mm and include all atypical, and congenital). Nevi should be variable.  Sites (except genitalia. For each site, sappropriate, if left)	e recorded as specify number	a continuous	
		Site	Number	Number	
2.	Nevi count		(left)	(right)	Mandatory sites: back, one arm
2.	Nevi count	Scalp			
		Face (including ears)			
		Neck Anterior thorax + abdomen			
		Back			
		Upper extremities including deltoid			
		Lower extremities including gluteus			
		Palms			
		Soles			
	Nevi count	Consider nevi ≤2	mm		
3.	(Optional)	Five categories (based on a total body coa. 0 b. 1-50 c. 51-100 d.	ount): 101-200 e		
	Clinically atypical nevi Clinical definition: macular (i.e. flat)	Record number of clinically atypical ne	vi as a continu		
4.	component in at least part of the lesion (mandatory) and at least 3 of the following criteria:  - >5 mm diameter	At site of melanoma (i.e. area around th YES/NO	e site with a 20	) cm radius)?	

	<ul><li>multiple colors</li><li>hazy borders</li><li>erythema</li></ul>		
5.	<b>Congenital nevi</b> , CN (only medium, large, or giant)	Medium-sized CN: YES/NO If YES, site(s):  Large-sized CN: YES/NO If YES, site(s):  Giant CN: YES/NO	Size at phenotyping for: - medium CN >1.5–19.9 cm - large CN ≥20 cm - giant CN ≥40 cm  Exclude small (i.e. ≤1.5 cm CN)
6.	Blue nevi (Optional)	If YES, site(s):  YES/NO  If YES, number:	
7.	Actinic keratoses	YES/NO  Site: a. scalp, b. face, c. other exposed areas (hands, arms, trunk, legs)  If YES, describe the predominant type of distribution: a. isolated/scattered b. clustered c. confluent	Description per AKASI or AK-FAS scoring systems can be added – see references 24 and 25
8.	Current (i.e. at time of visit) non- melanoma skin cancer, KSC (basal cell carcinoma, BCC, and squamous cell carcinoma, SCC)	BCC: YES/NO If YES, number: Site(s):  Invasive SCC: YES/NO If YES, number: Site(s):  In situ SCC: YES/NO If YES, number: Site(s):	

	II. MEDICAL HISTORY/MEDI	CATIONS (completed by physician/study nurse)	
9.	History of medical (non-cancer) diagnoses	List all diagnoses from medical history (include corresponding ICD-10 codes)	
10.	Previous and concomitant treatments (related to above-mentioned diagnoses) (Optional)	Record all medications and time of drug exposure (from YYYY to YYYY)	If specific hypotheses are to be tested regarding association of medications with melanoma risk, then there may be certain classes of drugs for which definitive answers are needed
11.	Pregnancy history	No. of full-term pregnancies:     Date of birth of children:     No. of miscarriages:     Did melanoma occur during pregnancy: YES/NO     Did melanoma occur before pregnancy: YES/NO     How many years before pregnancy?  Did melanoma occur after pregnancy: YES/NO     How many years after pregnancy: YES/NO     How many years after pregnancy?  History of hormone-assisted pregnancy (IVF) before diagnosis:     YES/NO	Please describe the closest pregnancy as a time event to melanoma diagnosis
12.	Lifetime history of non-melanoma skin cancer, KSC (basal cell carcinoma, BCC, and squamous cell carcinoma, SCC)	For BCC indicate:  - No. of BCCs - Before or after melanoma diagnosis - Site(s): - Dates of diagnosis (optional):  For invasive SCC indicate: - No. of SCCs - Before or after melanoma diagnosis - Site(s): - Dates of diagnosis (optional):	

		For in situ SCC indicate:  - Type and number of in situ SCC: _Bowen (skin),     _Erythroplasia Querat (genital mucosa), _Other location (i.e.,     lip etc)  - Before or after melanoma diagnosis - Site(s): - Dates of diagnosis (optional):	
13.	Other non-cutaneous neoplasia	For each additional neoplasia: - Type - Age at of diagnosis: Year at diagnosis:	Refer to Appendix <i>D</i> .  Include whether there is histologic or other confirmation of the cancer diagnosis
	III. FAMILY HISTORY OF MEI	_ANOMA OR OTHER CANCERS (completed by ph	ysician/study nurse)
14.	Family history of melanoma (up to 3 <sup>rd</sup> degree relatives)	<ul> <li>YES/NO/Not known/Other (specify:)</li> <li>Type of melanoma (cutaneous, uveal, other, don't know):</li> <li>Define the affected relative (maternal or paternal side; indicate if 1st, 2nd, 3rd degree relative and age at diagnosis). Note denominator (number of relatives in family) or provide pedigree</li> </ul>	Note: our definition of "familial melanoma" applies to low incidence geographic regions, such as the Mediterranean basin. A different definition would apply to other regions  *If there is no intention for genetic studies then a family history limited to 1st degree relatives is adequate but number of affected members in the larger family should be recorded.
15.	Germline status (Optional)	<ul> <li>Not tested</li> <li>CDKN2A</li> <li>CDK4</li> <li>BAP-1</li> <li>MC1R</li> <li>TERT</li> <li>MITF</li> <li>POT1</li> <li>Other (name genes, including other cancer predisposing genes)</li> </ul>	
16.	Family history of other cancers (up to	- Type of cancer (exclude NMSC and melanoma)	Refer to Appendix D.

	3 <sup>rd</sup> degree relatives)	<ul> <li>Define the affected relative (maternal or paternal side; indicate if 1st, 2nd 3rd degree relative and age at diagnosis)</li> <li>Provide pedigree (if available)</li> </ul>	
Section	C - Completion Evaluation Questions		
17.	Were you able to respond to the questions of this Section?	<ul> <li>All questions</li> <li>Most questions</li> <li>Nearly half of the questions</li> <li>Very few questions</li> </ul>	
18.	Which questions of this Section did you consider difficult to fill in?	- None - Number:	

	SECTION D					
	I. MELANOMA CHARACTERISTICS (completed by physician/study nurse)					
1.	Pre-existing pigmented lesion at the same site of melanoma	YES/NO/Not known  If YES, how long (No. of yrs) was the pre-existing pigmented lesion present?				
2.	Detection of melanoma (Optional)	<ul><li>Patient</li><li>Relative/Spouse/Friend</li><li>Physician</li><li>Other</li></ul>				
3.	Self-skin exam (Optional)	How often did you check your skin in the past 3 yrs?  - Never - Once - Once/year - More than once/year				

4.	Skin exam by physician (Optional)	How often did a physician examine your skin in the past 3 yrs?  - Never  - Once  - Once/year  - More than once/year  - Do not recall a physician ever examining my skin	
5.	Multiple primary melanoma (MPM) – concurrent or previous	YES/NO If YES, No. of primaries (separate recording for each melanoma)	If additional primary melanomas, complete section H1, H2 etc for each tumor  Include melanoma in situ and record separately from invasive melanoma
6.	Date of diagnosis	Date of diagnosis as in the pathology report for each melanoma DD/MMM/YYYY	
7.	Is the primary tumor known?	YES/NO (i.e. metastatic disease with unknown primary) If YES, proceed with the other questions	

		abdomen_left	eyelid_left	lip
		abdomen_middle	eyelid_right	lumbar
		abdomen_right		nail_finger_left
		anus	finger_left	nail_finger_right
		arm_left_anterior	finger_right	nail_toe_left
		arm_left_posterior	foot_left_dorsal	nail_toe_right
		arm_right_anterior	foot_left_plantar	nose
		arm_right_posterior	foot_right_dorsal	penis_scrotum
		axilla_left	foot_right_plantar	scalp
		axilla_right	forearm_left_anterior	shoulder_left
		back_left	forearm_left_posterior	shoulder_right
		back_middle	forearm_right_anterior	thigh_left_anterior
8.	Site	back_right	forearm_right_posterior	thigh_left_posterior
		buttock_left	forehead	thigh_right_anterior
		buttock_right	hand_left_dorsal	thigh_right_posterior
		cheek_left	hand_left_palmar	toe_left
		cheek_right	hand_right_dorsal	toe_right
		chest_left	hand_right_palmar	vagina
		chest_middle	head	vulva
		chest_right	laterocervical_left	other
		chin	laterocervical_right	
		ear_left	leg_left_anterior	
		ear_right	leg_left_posterior	
		eye_left	leg_right_anterior	
		eye_right	leg_right_posterior	
		, , , , , , , , , , , , , , , , , , ,		
	Breslow thickness		Continuous variable (	mm)
9.			Continuous variable (	mm)
	Other main histopathologic	Subtype: SSM, NM, LMN	1 ΔI M Desmonlastic	Mucosal Hypal Oth
10.	features	Jublype. Joivi, Ivivi, Liviiv	n, ALIVI, DESITIUPIASIIC,	iviucosai, Oveai, Oli

Tumor Infiltrating Lymphocytes (TILs) (absent/non Associated nevus (absent/present, specify type): Vascular invasion (absent/present): Microsatellitosis (absent/present): Pigmentation (absent/partially pigmented/fully pigr Solar elastosis (absent/mild/moderate/severe): Lateral margin status (disease-free or not):		Ulceration (absent/present): Tumor growth phase (radial/vertical): Regression (absent/present, specify percentage; <50% or >50%): Tumor Infiltrating Lymphocytes (TILs) (absent/non-brisk/brisk): Associated nevus (absent/present, specify type): Vascular invasion (absent/present): Microsatellitosis (absent/present): Pigmentation (absent/partially pigmented/fully pigmented): Solar elastosis (absent/mild/moderate/severe):	
11.	Sentinel Lymph Node (SLN) biopsy	YES, NO, Not done, Not known If YES, specify if positive/negative	
12.	AJCC stage at diagnosis	Record AJCC staging	Specify AJCC version
13.	Mutational data for melanoma tissues	<ul><li>Record results for each gene (BRAF, NRAS, KIT, others)</li><li>Source of data (primary or metastatic tissue)</li><li>If metastatic, record site (skin, lymph node, brain, lung, other)</li></ul>	If available

- II. CHARACTERISTICS OF 2<sup>nd</sup> PRIMARY MELANOMA, repeat items from 1-13 (completed by physician/study nurse)
- III. CHARACTERISTICS OF 3<sup>rd</sup> PRIMARY MELANOMA, repeat items from 1-13 (completed by physician/study nurse)