

## SUPPLEMENTARY MATERIAL

### **Evaluation of a training course for general practitioners within the melanoma multimedia education program of the Italian melanoma intergroup: study protocol**

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**Ethics approval and consent to participate:** the study design complied with the Declaration of Helsinki ethical standards and was approved by the Ethics Committee at the Romagna Cancer Institute (ID: IRST100.37; IRST identifier codes: L4P3037, wfn.27L4). The study was approved by the Scientific Committee of the Italian Melanoma Intergroup (IMI).

**Availability of data and material:** the anonymized dataset used in this study is available on request from the corresponding author.

**Informed consent:** there are no risks associated with this study. Individual patient consent was not required as anonymized data were used.

**Table S1. Question and answers of the pre-training and post-training questionnaires. The right answer is underlined.**

Question number	Question text	Multiple choice answer
Consent and demographic questions		
1	In accordance with EU Regulation 679/2016 regarding personal data protection, do you consent to the processing of your personal data?	a) Yes b) No
2	Select your job title	a) General Practitioner b) Resident General Practitioner c) Paediatrician
3	What age group do you belong to?	a) <40 b) 40-60 c) >60
Theoretical questions		
1*	Which of the following is a risk factor for melanoma?	a) <u>Ultraviolet radiation</u> b) Cigarette smoke c) Consumption of red meat d) Alcohol abuse
2*	What is needed for a complete visual examination of the skin?	a) Evaluation only of the suspected neoforation reported by the patient b) Live evaluation of the entire skin area in dim light c) <u>Live evaluation of the entire skin area in optimal lighting conditions and with the use of a magnifying glass</u> d) Referral to the specialist reference centre
3*	What does the ABCDE acronym for the recognition of a suspected melanoma mean?	a) Asymmetry, Regular edges, Homogeneous colour, Dimensions <2 mm, Empathy b) Asymmetry, Irregular edges, Homogeneous colour, Dimensions <5 mm, Static evolution c) <u>Asymmetry, Irregular edges, Uneven colour, Dimensions &gt;6 mm, rapid Evolution</u> d) Asymmetry, Irregular edges, Homogeneous color, Small dimensions, Entropy e) I don't know the ABCDE acronym
4*	What does the EFG rule coined by Australian dermatologists for the	a) Eritema, Firm, Ground b) <u>Elevation, Firm, Growth</u> c) Evolution, Figure, Great dimension

	recognition of suspected nodular melanoma mean?	<p>d) Extension, Family history, Great dimension</p> <p>e) I don't know the EFG rule</p>
5*	What is meant by the “ugly duckling” sign for recognizing a suspected melanoma?	<p>a) Homogeneous nevus equal to other nevus in shape and color</p> <p>b) Nevus regular compared to other nevus</p> <p>c) Moriform congenital nevus</p> <p>d) <u>Different nevus that "stands out" compared to other nevus due to its shape, color and/or rapid evolution</u></p> <p>e) I don't know the sign of the "ugly duckling"</p>
6*	Which of the following statements about dermoscopy is true?	<p>a) <u>Dermoscopy is a non-invasive technique that allows the in vivo evaluation of skin colors and structures not visible to the naked eye</u></p> <p>b) Dermoscopy is a non-invasive technique that uses a laser beam with a near-infrared wavelength (830 nm), to evaluate the cells of the superficial layer of the skin at a depth of approximately 100-200 µm</p> <p>c) Dermoscopy is an incisional biopsy specific for melanocytic lesions</p> <p>d) Dermoscopy can replace histological examination</p>
7*	Which of the following statements about Breslow thickness is true?	<p>a) It indicates the degree of invasion of the skin. It is divided into 5 levels based on the degree of infiltration: from I (melanoma in situ) to V (infiltration of the entire dermis up to the adipose tissue)</p> <p>b) <u>It indicates the thickness of the melanoma from the granular layer of the skin (or from the base of the ulcer if the lesion is ulcerated) to the point of maximum infiltration into the dermis. It is measured in mm</u></p> <p>c) It indicates whether the melanoma is in the horizontal or vertical histological phase</p> <p>d) It indicates the depth of tumor-infiltrating lymphocytes (TILs)</p>
Images		

1*	Consider the following pigmented lesion, indicate if it is:	a) Benign b) Malignant c) I don't know
	Would you refer the patient to a dermatologist?	a) Yes b) No
	Which is your diagnosis?	a) Common Nevus b) Atypical Nevus c) <u>Melanoma</u> d) Seborrheic Keratosis
2*	Consider the following pigmented lesion, indicate if it is:	a) Benign b) Malignant c) I don't know
	Would you refer the patient to a dermatologist?	a) Yes b) No
	Which is your diagnosis?	a) Seborrheic Keratosis b) Common Nevus c) <u>Congenital Nevus</u> d) Melanoma
3*	Consider the following pigmented lesion, indicate if it is:	a) Benign b) Malignant c) I don't know
	Would you refer the patient to a dermatologist?	a) Yes b) No
	Which is your diagnosis?	a) <u>Seborrheic Keratosis</u> b) Common Nevus c) Atypical Nevus d) Melanoma
4*	Consider the following pigmented lesion, indicate if it is:	a) Benign b) Malignant c) I don't know
	Would you refer the patient to a dermatologist?	a) Yes b) No
	Which is your diagnosis?	a) Seborrheic Keratosis b) Common Nevus c) Congenital Nevus d) <u>Melanoma</u>
5*	Consider the following pigmented lesion, indicate if it is:	a) Benign b) Malignant c) I don't know
	Would you refer the patient to a dermatologist?	a) Yes b) No
	Which is your diagnosis?	a) Congenital Nevus b) <u>Melanoma</u>

		c) Seborrheic Keratosis d) Basal cell carcinoma
6*	Consider the following pigmented lesion, indicate if it is:	a) Benign b) Malignant c) I don't know
	Would you refer the patient to a dermatologist?	a) Yes b) No
	Which is your diagnosis?	a) <u>Melanocytic Nevus</u> b) Basal cell carcinoma c) Melanoma d) Seborrheic Keratosis
7*	Consider the following pigmented lesion, indicate if it is:	a) Benign b) Malignant c) I don't know
	Would you refer the patient to a dermatologist?	a) Yes b) No
	Which is your diagnosis?	a) Atypical Nevus b) <u>Congenital Nevus</u> c) Melanoma a) Basal cell carcinoma
8*	Consider the following pigmented lesion, indicate if it is:	a) Benign b) Malignant c) I don't know
	Would you refer the patient to a dermatologist?	a) Yes b) No
	Which is your diagnosis?	a) Melanocytic Nevus b) Angioma c) <u>Melanoma</u> d) Basal Cell Carcinoma
9*	Consider the following pigmented lesion, indicate if it is:	a) Benign b) Malignant c) I don't know
	Would you refer the patient to a dermatologist?	a) Yes b) No
	Which is your diagnosis?	a) Solar Lentigo b) Seborrheic Keratosis c) Congenital Nevus d) <u>Malignant Lentigo</u>
10*	Consider the following pigmented lesion, indicate if it is:	a) Benign b) Malignant c) I don't know
	Would you refer the patient to a dermatologist?	a) Yes b) No
	Which is your diagnosis?	a) Seborrheic Keratosis

		b) <u>Basal Cell Carcinoma</u> c) Congenital Nevus d) Melanoma
Global evaluation questions		
1*	How confident do you feel in giving patients information on the primary prevention of skin cancer?	a) Absolutely not confident b) Not confident c) Don't know d) Confident e) Absolutely confident
2*	How confident do you feel in informing the patient about the skin self-examination?	a) Absolutely not confident b) Not confident c) Don't know d) Confident e) Absolutely confident
3*	How confident do you feel in making a diagnosis of a suspected melanoma?	a) Absolutely not confident b) Not confident c) Don't know d) Confident e) Absolutely confident
4**	Do you think MelaMED has improved your ability to recognize patients at high risk of melanoma?	a) Absolutely disagree b) Disagree c) Don't know d) Agree e) Absolutely agree
5**	Do you think MelaMED has improved your ability to distinguish melanoma from benign lesions?	a) Absolutely disagree b) Disagree c) Don't know d) Agree e) Absolutely agree
6**	Do you think MelaMED has improved your knowledge in skin cancer management?	a) Absolutely disagree b) Disagree c) Don't know d) Agree e) Absolutely agree
7**	Do you prefer multimedia training based on the MelaMED model to traditional live training?	a) Absolutely disagree b) Disagree c) Don't know d) Agree e) Absolutely agree
8**	Do you think that the active participation of GPs, resident GPs and paediatricians can improve the early diagnosis of melanoma?	a) Absolutely disagree b) Disagree c) Don't know d) Agree e) Absolutely agree

9**	Would you be interested in attending a dermoscopy course?	a) Yes b) No
10**	Would you like to receive additional information about melanoma on a regular basis?	a) Yes b) No

GP, general practitioner; \*question present both in pre-training and post-training questionnaire; \*\*question present only in the post-training questionnaire.

**Table S2. Distribution of the number of clear and understandable questions from the pre and post-training questionnaire. Questions that has been evaluated include the 7 theoretical questions and the 10 questions about the images, for a total of 17 questions.**

Participants	Clear and understandable questions N(%)	Not clear and understandable questions N(%)
14	17 (100)	0 (0)
3	16 (94)	1 (6)
2	15 (88)	2 (12)
1	14 (82)	3 (18)