

## Taking an Online Dermoscopy Test Improves the Practice and the Feeling of Legitimacy of GPs in Melanoma Detection

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### Introduction

Primary care became a suitable setting for skin cancer screening in the context of a growing shortage of dermatologists [1]. However, general practitioners (GPs) often feel insufficiently legitimate to use dermoscopy despite adequate training [2].

We created the TODIV (Test of Dermoscopy for International Validation), a standardized, non-stigmatizing self-evaluation tool [3].

The primary endpoint of this second study was to evaluate if taking it led to a modification in the professional practices of GPs, evaluated on the following items: (i) frequency of dermoscopy use, (ii) number of diagnosed melanomas, (iii) attendance of a new practical or theoretical training, and (iv) autonomy (defined as fewer referrals to dermatologists).

The secondary endpoints were self-perceived legitimacy six months (M6) after the test (scored from 0 to 10 on a Likert scale) and evolution towards a referral contact for fellow GPs in the same geographic area based on the following analysis of practice: (i) tele-expertise offer, (ii) dedicated clinic, and (iii) referral activity for other GPs.

We conducted an observational quantitative cross-sectional questionnaire study on GPs at M6 after the test when taken between 01 March 2023 and 01 January 2024. The survey, created on Google Form (Alphabet, 2023, Mountain View, USA), was sent by email, with one reminder after two weeks. As an incentive, a dermoscope was offered to one randomly selected respondent. Our study was approved by the ethical committee of Jean Monnet university of Saint Etienne (IRBN112023/CHUSTE. 04/01/2023), according to the Helsinki declaration. Treatment of data was anonymous. Data

analysis was done with SPSS Statistics, version 26 (IBM, Armonk, USA).

For the analysis of the primary endpoint, we rated as very significant if a change encompassed at least three out of the four criteria, and significant if two out of four were observed.

## Findings

Among the 67 GPs who took the TODIV, 44 responded to the survey (65.67%) (Table 1) and 25 (56.82%) made progress on at least two criteria out of four (Figure 1).

Regarding legitimacy, 32 participants said their feeling of legitimacy was enhanced after six months (72.73%) (data not available for three participants, 6.82%). The median legitimacy score increased from 4 (mean 4.32/ range 1-9) immediately post-TODIV to 7 (mean 6.77/ range 1-10) at six months ( $p < 0.0001$ ).

Regarding the role of local referral contact, the results showed that 10/44 (22.27%) provided teleexpertise opinions to other GPs, 28/44 (63.64%) created a specific clinic for skin cancer detection and 27/44 (61.36%) began to receive patients referred by other GPs in cases of skin cancer suspicion.

Non-respondents showed significantly lower immediate post-TODIV scores: legitimacy median 3 (mean 3.21) versus 4 (mean 4.32), diagnosis grade median 39 (mean 37.92) versus 53 (mean 52).

## Conclusion

In our study sample of GPs, taking the TODIV led to significant improvement in practices over six months for more than the half and enhanced their self-perceived legitimacy. However, the poorer performance of non-respondents suggests potential discouragement among lower-performing participants, highlighting the importance of adequate preparation before testing.

**Table 1. Participants.**

	Total GPs	Respondents	Non Respondents
<b>Participants</b>	67	44	23
<b>Sex</b>			
Male	22/67 (33%)	12/44 (27%)	10/23 (43%)
Female	45/67 (67%)	32/44 (73%)	13/23 (57%)
<b>Age</b>			
Mean	35.3	35.6	34.8
Median	34	34	35
NC	2	2	0
<b>University Level</b>			
Resident	8/67 (12%)	3/44 (7%)	5/23 (22%)
Senior Resident	1/67(1%)	0/44 (0%)	1/23 (4,3%)
Instructors	5/67 (7%)	4/44 (9%)	1/23 (4,3%)
Medical Doctor, private practice	50/67 (75%)	35/44 (80%)	15/23 (65%)
Medical Doctor, hospital practice	3/67 (4%)	2/44 (4%)	1/23 (4.3%)
<b>Training time in a dermatology department/consultation</b>			
Never	18/67 (27%)	8/44 (18%)	10/23 (43.5%)
1-10 days	27/67 (40%)	17/44 (39%)	10/23 (43.5%)
10-30 days	9/67 (13%)	8/44 (18%)	1/23 (4.3%)
30-120 days	6/67 (9%)	5/44 (11%)	1/23 (4.3%)
>120 days	7/67 (11%)	6/44 (14%)	1/23 (4.3%)
<b>Dermoscopy Use</b>			
<1 year	48/67 (72%)	28/44 (64%)	20/23 (87%)
1-3 years	18/67 (27%)	15/44 (34%)	3/23 (13%)
3-10 years	1/67(1%)	1/44 (2%)	0/23 (0%)
>10 years	0/67 (0%)	0/44 (0%)	0/23 (0%)

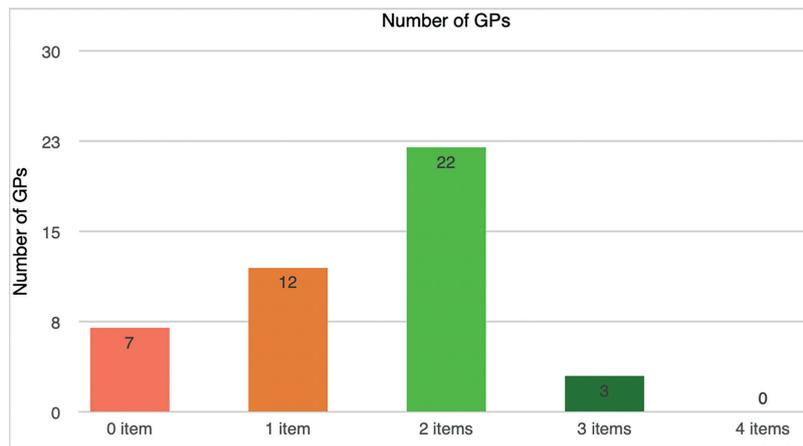


Figure 1. Number of items changed after TODIV.

**Ethical Committee Approval:** (IRBN112023/CHUSTE. 04/01/2023): Ethical Committee of Saint-Etienne University Hospital Center.

**Ethics Statement:** The patients in this study gave written informed consent to the publication of their case details. The participants gave consent to the use of their data. This study has not been registered in a public trial registry because it does not “prospectively assign human subjects to intervention or comparison groups to evaluate the cause-and-effect relationship between a medical intervention and a health outcome” this study does not fall into the scope of the French law Jardé (17 November 2016) because it uses images from a preexisting cohort of patients and their preexisting clinical records.

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