

Establishing the use of total body photography among UK dermatologists

Ji-Xu, A; Dinnes, J; Matin, R N

DOI:

[10.1111/ced.14882](https://doi.org/10.1111/ced.14882)

License:

Other (please specify with Rights Statement)

Document Version

Peer reviewed version

Citation for published version (Harvard):

Ji-Xu, A, Dinnes, J & Matin, RN 2021, 'Establishing the use of total body photography among UK dermatologists', *Clinical and Experimental Dermatology*, vol. 47, no. 1, pp. 182-184.
<https://doi.org/10.1111/ced.14882>

[Link to publication on Research at Birmingham portal](#)

Publisher Rights Statement:

This is the peer reviewed version of the following article: Ji-Xu, A., Dinnes, J. and Matin, R.N. (2021), Establishing the use of total body photography among UK dermatologists. *Clin Exp Dermatol.*, which has been published in final form at: <https://doi.org/10.1111/ced.14882>. This article may be used for non-commercial purposes in accordance with Wiley Terms and Conditions for Use of Self-Archived Versions. This article may not be enhanced, enriched or otherwise transformed into a derivative work, without express permission from Wiley or by statutory rights under applicable legislation. Copyright notices must not be removed, obscured or modified. The article must be linked to Wiley's version of record on Wiley Online Library and any embedding, framing or otherwise making available the article or pages thereof by third parties from platforms, services and websites other than Wiley Online Library must be prohibited.

General rights

Unless a licence is specified above, all rights (including copyright and moral rights) in this document are retained by the authors and/or the copyright holders. The express permission of the copyright holder must be obtained for any use of this material other than for purposes permitted by law.

- Users may freely distribute the URL that is used to identify this publication.
- Users may download and/or print one copy of the publication from the University of Birmingham research portal for the purpose of private study or non-commercial research.
- User may use extracts from the document in line with the concept of 'fair dealing' under the Copyright, Designs and Patents Act 1988 (?)
- Users may not further distribute the material nor use it for the purposes of commercial gain.

Where a licence is displayed above, please note the terms and conditions of the licence govern your use of this document.

When citing, please reference the published version.

Take down policy

While the University of Birmingham exercises care and attention in making items available there are rare occasions when an item has been uploaded in error or has been deemed to be commercially or otherwise sensitive.

If you believe that this is the case for this document, please contact UBIRA@lists.bham.ac.uk providing details and we will remove access to the work immediately and investigate.

Correspondence

Establishing the use of total body photography among U.K. dermatologists

A Ji-Xu¹, J Dinnes^{2,3}, RN Matin¹

¹Department of Dermatology, Oxford University Hospitals NHS Foundation Trust, Oxford, United Kingdom; ²Test Evaluation Research Group, Institute of Applied Health Research, University of Birmingham, Birmingham, United Kingdom; ³NIHR Birmingham Biomedical Research Centre, University Hospitals Birmingham NHS Foundation Trust and University of Birmingham, Birmingham, United Kingdom

Correspondence: Rubeta N Matin

E-mail: rubeta.matin@ouh.nhs.uk

Funding sources: Jac Dinnes is supported by the NIHR Birmingham Biomedical Research Centre. This paper presents independent research supported by the NIHR Birmingham Biomedical Research Centre at the University Hospitals Birmingham NHS Foundation Trust and the University of Birmingham. The views expressed are those of the authors and not necessarily those of the NHS, the NIHR or the Department of Health and Social Care.

Conflicts of interest: None to declare.

Ethical approval: Exempt.

Word count: 499

Figure count: 2

References: 5

Total body photography (TBP) is increasingly used to monitor skin lesions in individuals at high risk of melanoma. Two surveys of U.S. dermatologists demonstrated variable reasons for use and conflicting beliefs regarding TBP efficacy.^{1,2} Although TBP may reduce number-needed-to-biopsy when diagnosing melanoma, there is scarce evidence for TBP use in lower-risk populations and a lack of consensus on optimal TBP use.³ Thus, we undertook the first U.K. survey to assess TBP rationale, target populations, and protocols.

A questionnaire was distributed via the British Association of Dermatologists Newsletter in December 2020 (Supplemental Methods): 107 responses (9% response rate) were received from 62 National Health Service Trusts representing all UK regions. Respondents were most commonly 41-60 years old, 51% were male, 83% were consultants and 12% specialist registrars.

Nearly 65% (69/107) respondents reported using TBP (Figure 1). Approximately 54% (37/69) of respondents conducted TBP within a high-risk melanoma surveillance clinic. Median number of photographs/patient was 12. Most protocols included face (68%, 47/69); fewer included palms (42%, 29/69) and soles (29%, 20/69). Most protocols (94%, 65/69) included close-up images, and 86% (59/69) included dermoscopic images. Respondents used TBP to compare either only clinically suspicious naevi (45%, 31/69) or every naevus (33%, 23/69) to a previous TBP image set. Only 3% (2/69) of protocols used artificial intelligence (AI), but 68% (47/69) respondents believed AI could facilitate future TBP use.

Overall, 49% (34/69) respondents provided all patients with their TBP images and 42% (29/69) provided to patients who requested it. While 38% (26/69) reported patients using smartphone apps to monitor lesions (including MySkinSelfie and Miiskin), 19% (13/69) recommended patients use apps to monitor skin lesions. Thirty-six per cent (38/69) did not use TBP (Figure 2). TBP use was not associated with age, gender or grade.

Reasons cited for TBP use were consistent with published studies, including detection of thinner melanomas and reduced number-needed-to-biopsy.³ Target populations were mostly patients at high risk of melanoma. Only 7% of respondents using TBP in lower-risk patients.

To our knowledge, this is the first evaluation of TBP use among U.K. dermatologists, illustrating variability in reasons for use, target populations, and protocols. Despite reports that TBP can reduce number of biopsies and patient anxiety in specific groups^{3,4}, around 10% clinicians reported not using TBP due to beliefs that it leads to more biopsies or patient anxiety. Logistical constraints and lack of training were cited as barriers to uptake and could be addressed nationally.

Nearly 40% of respondents reported patients using smartphone apps to monitor skin lesions in addition to TBP and 1/5 clinicians recommended apps for monitoring naevi, despite evidence suggesting that current apps using AI to identify suspicious lesions have poor accuracy.⁵

Limitations of our study include convenience sampling and a significant risk of non-response bias due to low response rate which may have led to overestimation of TBP utilization. Nevertheless, these data will help to inform the design of prospective studies of TBP in melanoma diagnosis.

References

1. Terushkin V, Oliveria SA, Marghoob AA, Halpern AC. Use of and beliefs about total body photography and dermatoscopy among US dermatology training programs: an update. *J Am Acad Dermatol*. 2010 May;62(5):794–803.
2. Rice ZP, Weiss FJ, DeLong LK, Curiel-Lewandrowski C, Chen SC. Utilization and rationale for the implementation of total body (digital) photography as an adjunct screening measure for melanoma. *Melanoma Res*. 2010 Oct;20(5):417–21.
3. Ji-Xu A, Dinnes J, Matin RN. Total body photography for the diagnosis of cutaneous melanoma in adults: a systematic review and meta-analysis. *Br J Dermatol*. 2020 Dec 28;
4. Moyer MS, King SMC, Rice ZP, DeLong LK, Seidler AM, Veledar E, et al. Effects of total-body digital photography on cancer worry in patients with atypical mole syndrome. *JAMA Dermatol*. 2015 Feb;151(2):137–43.
5. Freeman K, Dinnes J, Chuchu N, Takwoingi Y, Bayliss SE, Matin RN, et al. Algorithm based smartphone apps to assess risk of skin cancer in adults: systematic review of diagnostic accuracy studies. *BMJ*. 2020 Feb 10;368:m127.

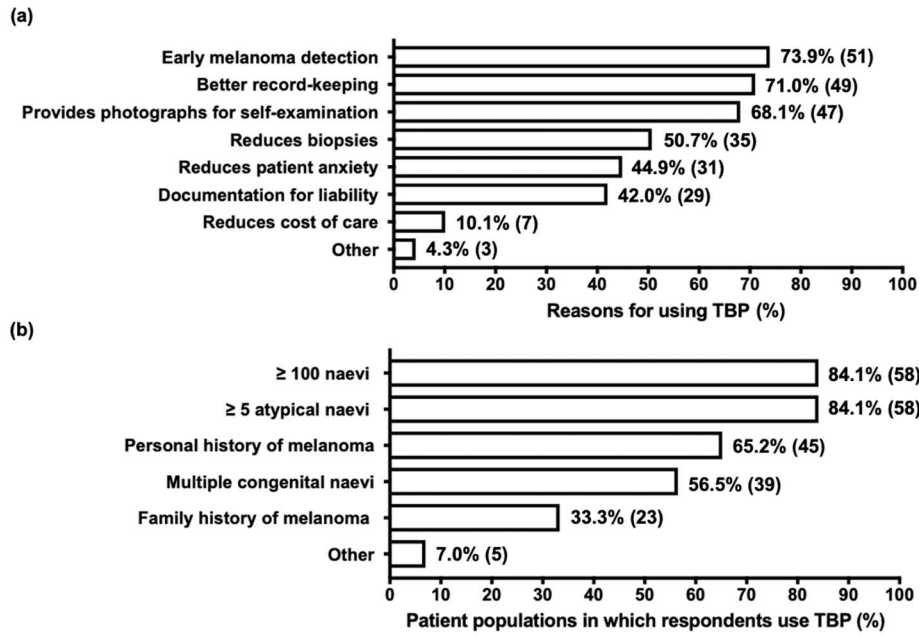


Figure 1. (a) Reasons for and (b) targets populations in which total body photography is used among U.K. dermatologists. Data shown as % (n). TBP, total body photography.

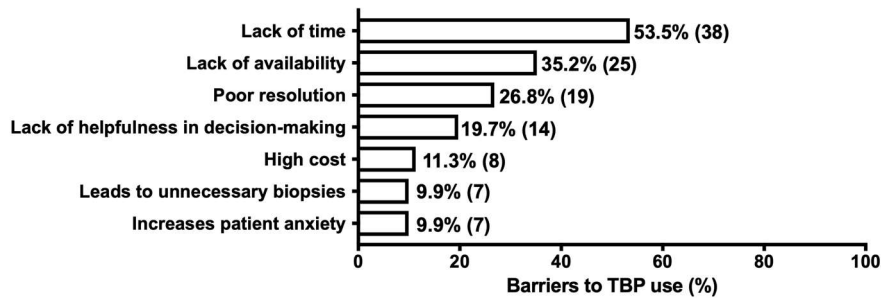


Figure 2. Barriers preventing the use of total body photography among U.K. dermatologists. Data shown as % (n). TBP, total body photography.