

Supplementary Material

Table S1. Summary of the critical appraisal using Joanna Briggs Institute checklists for case-control ⁽¹⁾ and cross-sectional ⁽²⁾ studies

First author (Year)	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	NRR	Comments
Bataille (2000) ¹	Y	Y	N	Y	Y	Y	Y	Y	-	-	ND	
Karlsson (2000) ¹	Y	Y	N	Y	Y	Y	N	Y	-	-	32	Q2: Time period of the data collection has not been reported. Q7: Qualification of the counter or whether training for naevus counting was given are not mentioned.
Naldi (2000) ²	Y	Y	Y	N	Y	Y	Y	N	N	Y	<1	Q1: Cases with in-situ melanoma or with a previous history of melanoma have been excluded.
Landi (2001) ²	Y	Y	Y	N	Y	Y	Y	N	N	Y	ND	
Silva (2009) ¹	Y	Y	N	Y	Y	Y	N	Y	-	-	37	
Nagore (2010) ²	Y	Y	Y	N	Y	Y	Y	N	N	Y	ND	
Newton-Bishop (2010) ²	Y	Y	Y	N	Y	Y	Y	N	N	Y	33 [*] , 45 [#]	
Breitbart (2012) ¹	Y	N	N	N	NA	NA	Y	Y	-	-	81	Q2: Demographics have not been reported. Q6: A population-based screening project and the main objective of the study was to see the feasibility of a mass scale skin cancer project. Q7: Naevus count outcome was <40 vs >40

Abbreviations: NRR – Nonresponse rate, ND – Not disclosed

^{*}For cases, [#]For controls

¹For cross-sectional studies

Q1: Inclusion criteria clearly defined

Q2: Study subjects and setting described in detail

Q3: Valid and reliable measurement of exposure

Q4: Objective, standard criteria used for measurement of condition

Q5: Confounding factors identified

Q6: Strategies for dealing with confounding factors stated

Q7: Valid and reliable measurement of outcomes

Q8: Appropriate statistical analysis

²For case-control studies

Q1: Were the groups comparable other than the presence of disease in cases or the absence of disease in controls?

Q2: Were cases and controls matched appropriately?

Q3: Were the same criteria used for identification of cases and controls?

Q4: Was exposure measured in a standard, valid and reliable way?

Q5: Was exposure measured in the same way for cases and controls?

Q6: Were confounding factors identified?

Q7: Were strategies to deal with confounding factors stated?

Q8: Were outcomes assessed in a standard, valid and reliable way for cases and controls?

Q9: Was the exposure period of interest long enough to be meaningful?

Q10: Was appropriate statistical analysis used?

Table S2. Summary of exposure measures reported in the studies

Exposure measurement	S1	S2	S3	S4	S5	S6	S7	S8
Skin colour	ND	ND	a	a	ND	ND	c	ND
Hair	b	b	b	b	a	b	a	ND
Eye colour	b	b	b	b	ND	b	b	ND
Melanoma personal history	ND	c	a	ND	ND	c	ND	c
Melanoma family history	ND	c	ND	NA	ND	c	ND	c
Ethnicity	ND	c	ND	ND	ND	ND	ND	ND
Occupational sun exposure	ND	c	ND	c	c	c	c	ND
Leisure sun exposure	ND	c	ND	c	c	c	c	ND
Geographic area childhood was spent	ND	c	ND	c	ND	ND	ND	ND
Acute reaction to first sun exposure	a	a	c	c	c	c	c	ND
History of sunburns (number and variety)	ND	ND	c	c	ND	c	ND	ND
Degree of freckling	a	ND	a	a	a	ND	a	ND
Sunscreen use	ND	ND	ND	c	ND	ND	ND	ND
Medical and family history of cancer and other diseases	ND	ND	ND	c	ND	ND	ND	ND
Tanning ability to prolonged sun	ND	ND	ND	c	ND	ND	c	ND
Use of sunlamps and sunbeds	ND	ND	ND	c	ND	ND	ND	ND
Residencies and holidays abroad/holiday exposure	ND	ND	ND	ND	c	c	c	ND
Skin aging	ND	ND	ND	ND	a	ND	ND	ND
Smoking	ND	ND	ND	ND	c	c	ND	ND
Genotyping	ND	ND	ND	ND	ND	ND	a	ND

Abbreviations: a – Reported, valid and reliable, from surgical records or scientific measurement criteria by the researcher, b – Reported, but may not be valid and reliable since a measurement of a past value might be more appropriate, c – Self-reported, d – Reported, but no record of how information was collected, ND – Not reported/not disclosed.

S1 – Bataille et al. (2000)

S2 - Karlsson et al. (2000)

S3 – Naldi et al. (2000)

S4 – Landi et al. (2001)

S5 – Silva et al. (2009)

S6 – Nagore et al. (2010)

S7 – Newton-Bishop et al. (2010)

S8 – Breitbart et al. (2012)

Table S3. Critical appraisal of nevus identification and reporting methodologies using the new tool based on the IARC protocol. Each question is scored on a scale of 1-5, for a total score of 40

First author (Year)	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Total score	%
Bataille (2000)	2	1	1	4	2	4.5	4	4.5	23	58
Karlsson (2000)	1.5	2	1	1	1.5	1.5	4	2.5	15	38
Naldi (2000)	2	4	4	1	3	3.5	3.5	2.5	23.5	59
Landi (2001)	4	4	2	1.5	3.5	3.5	4.5	2.5	25.5	64
Silva (2009)	2	1.5	1	2	2	3.5	3.5	2	17.5	44
Nagore (2010)	3	3.5	1.5	1	3	3	2.5	2.5	20	50
Newton-Bishop (2010)	2	1.5	1	1	2	3.5	2	2	15	38
Breitbart (2012)	1.5	4	1	1	2.5	3.5	4	2	19.5	49

Q1: Clear definition for countable lesions/ common melanocytic nevi

Q2: Steps taken to make sure nevi are not confused with other similar lesions

Q3: Using a standard (tool) to measure the nevi

Q4: Reporting the setting where nevus counting was carried out (e.g., lighting conditions, furniture used, magnification instruments)

Q5: Following a set sequence of measurements – countable lesions, assessing freckling, assessing solar lentigines; Describe detailed macroscopic features of a specified sample of countable lesions

Q6: Training of observers according to a protocol

Q7: Validity of counts, reproducibility of the study and inter- and intraobserver variation

Q8: Adherence to the IARC protocol or any other protocol considered in total