Fig. S1. Bar chart of the number of features offered by the 17 skin cancer-related apps identified.

Table SI. Baseline information of the 17 identified smartphone apps

App name	Platform	Developer	Category	Available languages	Cost (€)	Popularity (number of installations)	Target skin cancer
eDerma	iOS, Android	The Net Firm, informatica empresarial, S.L., Castellón de la Plana, Spain	Medicine (iOS), Health and fitness (Android)	Apple: 6 Android: n.a.	–	iOS: n.a. Android: 1,000–5,000	All skin disorders → Skin cancer in general
First Derm: Dermatologie Online (Android); First Derm Online Dermatologie (iOS)[a,b]	Android	iDoc24 Inc, Berkeley, CA, USA	Medicine	iOS: 8 Android: n.a.	In-app-purchase	iOS: n.a. Android: 10,000–50,000	All skin disorders → Skin cancer in general
Globaler UV Index Tracker & Vorhersage UVI Mate (Android), UV Index Now – UVI Mate (iOS)[a]	Android	Alexander Ershov, Perth,, Australia	Weather	iOS: 1 Android: n.a.	In-app-purchase	iOS: n.a. Android: 10,000–50,000	Skin cancer in general
iDoc 24 – Dermatologie Online (Android) iDoc 24 – Ask a dermatologist (iOS)[a,b]	Android	iDoc24 Inc, Berkeley, CA, USA	Medicine	iOS: 8 Android: n.a.	In-app-purchase	iOS: n.a. Android: 10,000–50,000	All skin disorders → Skin cancer in general
Melanom Test – Risikorechner für Melanome	iOS	Pears Health Cyber s.r.o., Prague, Czech Republic	Medicine	6	–	n.a.	Melanoma
Mole Monitor – Skin mole and rash tracker	iOS	Pro-Cal Powertrain Development Ltd, Brighton, UK	Medicine	31	–	n.a.	Skin cancer in general, focus on melanoma
MoleScope	iOS, Android	MetaOptima Technology Inc, Vancouver, BC, Canada	Medicine	iOS: 6 Android: n.a.	–	iOS: n.a. Android: 5,000–10,000	Skin cancer in general
My UV Patch – La Roche Posay	iOS	L'Oréal S.A., Paris, France	Education	20	–	n.a.	Skin cancer in general
MySkinPal – Muttermal Tracker (Android) Hautkrebs App – MySkinPal – Muttermal Tracker (iOS)[a]	Android	Piero Toffanin, MasseranoLabs LLC, Duluth, MN, USA	Medicine	iOS: 4 Android: n.a.	iOS: 3.49 Android: 2.19	iOS: n.a. Android: ~50,000–100,000, Proversion: 50–100	Skin cancer in general
Skin Prevention – Fotografische Karte des Körpers für die frühe Aufdeckung von Melanom und von Hautkrebs	iOS	DIMENSION S.r.l., Trento, Italy	Medicine	8	7.99	n.a.	All skin disorders → Skin cancer in general
Skintracer	iOS	Schmutz Medical GmbH, Basel, Switzerland	Medicine	3	–	n.a.	All skin disorders → Skin cancer in general
Solarize: Bräunungs Timer	Android	Tabero, Bolzano, Italy	Health and fitness	n.a.	–	10,000–50,000	Skin cancer in general
SkinVision	iOS, Android	SkinVision B.V, Amsterdam, Netherlands	Health and fitness	iOS: 3 Android: n.a.	In-app purchase	iOS: n.a. Android: > 100,000	All skin disorders → Skin cancer in general
Sunface – UV-Selfie	iOS, Android	Titus J. Brinker, Heidelberg, Germany	Health and fitness	iOS: 13 Android: n.a.	–	iOS: n.a. Android: 10,000–50,000	Skin cancer in general
UV-Check	iOS, Android	Professional Association of German Dermatologists e.V. (BVDD) in cooperation with the German Aerospace Center with LEO Pharma GmbH, Berlin, Germany	Health and fitness	1		iOS: n.a. Android: 10,000–50,000	Skin cancer in general
UVLens – UV Index Voraussage (Android), UV Lens – UV Index (iOS)[a]	Android	Spark Sixty Four Limited, Auckland, New Zealand	Health and fitness	iOS: 2 Android: n.a.		iOS: n.a. Android: 50,000–100,000	Skin cancer in general
UV Radiation now[a]	Android	Markus Karjalainen, Finland	Weather	iOS: 1 Android: 8	iOS: 1.09 Android: 1.19	iOS: n.a. Android: 1,000–5,000, Proversion: 100–500	Skin cancer in general

[a]Also available for iOS in the Apple App Store (but not in German), therefore listed under "Android". [b]The apps "iDoc24" and "First Derm" appear to be highly similar and were developed by the same company.
n.a.: not available.

Table SII. Overview of the content and features of 17 identified skin cancer-related apps for smartphones

App name	Tracking or mapping of moles	Reminder for tracking	Tele-dermatology	Search for local dermatologist	Risk calculator/ assessment	Prevention or education	Skin type determination	Sunscreen reminder or timer	Compatible with dermoscopy
eDerma	×	×				×			
First Derm: Online Dermatologie[a]		×	×	[×][b]		×	×		×
Globaler UV Index-Tracker & Vorhersage UVI Mate								×	
iDoc 24 –Dermatologie Online[a]	×		×	[×][b]		×	×		×
Melanom Test – Risikorechner für Melanome	×	×			×	×			
Mole Monitor – Skin mole and rash tracker	×	×							
MoleScope	×	×			×	×	×		×
My UV Patch – La Roche Posay						×	×	×	
MySkinPal – Muttermal Tracker	×	×	×		×	×			
Skin Prevention – Fotografische Karte des Körpers für die frühe Aufdeckung von Melanom und von Hautkrebs	×	×							×
Skintracer	×	×	×		×	×	×		
SkinVision	×	×	×		×	×			
Solarize: Bräunungs Timer						×	×	×	
Sunface						×			
UV-Check	×			×		×	×		
UVLens – UV Index Voraussage						×	×	×	
UV radiation now						×		×	

[a]Different name and layout, but highly similar content. [b]The search for a local dermatologist was only possible for physicians in San Francisco.

Table SIII. Mean MARS scores of the 17 identified skin cancer-related apps

| App name | Mean scores ± standard deviations (SD) of the domains (0–5)* | | | | | |
	MARS Mean±SD	Engagement Mean±SD	Functionality Mean±SD	Aesthetics Mean±SD	Information Mean±SD
eDerma	2.82±0.52	2.93±0.49	3.08±0.63	3.22±0.19	2.06±0.83
First Derm: Dermatologie Online (Android); First Derm Online Dermatologie (iOS)	3.94±0.64	3.06±0.64	4.17±0.19	4.56±0.51	3.95±0.95
Globaler UV Index Tracker & Vorhersage UVI Mate (Android), UV Index Now – UVI Mate (iOS)	4.33±0.33	4.27±0.60	4.00±1.05	4.78±0.19	4.28±0.61
iDoc 24 – Dermatologie Online (Android) iDoc 24 – Ask a dermatologist (iOS)	4.02±0.48	3.40±0.72	4.08±0.17	4.56±0.51	4.05±0.89
Melanom Test – Risikorechner für Melanome	3.06±0.49	2.60±0.72	3.75±0.32	2.89±0.96	3.00±0.42
Mole Monitor – Skin mole and rash tracker	4.21±0.40	4.13±0.45	4.33±0.38	4.67±0.33	3.72±0.71
MoleScope	4.16±0.54	3.40±0.37	4.17±0.33	4.67±0.33	4.39±0.53
My UV Patch – La Roche Posay	4.21±0.40	4.13±0.45	4.33±0.38	4.67±0.33	3.72±0.71
MySkinPal – Muttermal Tracker (Android) MySkinPal – MySkinPal – Muttermal Tracker (iOS)	4.36±0.42	4.00±0.24	4.67±0.27	4.78±0.19	4.00±0.92
Hautkrebs App – Fotografische Karte des Körpers für die frühe Aufdeckung von Melanom und von Hautkrebs	n.a.	n.a.	n.a.	n.a.	n.a.
Skintracer	3.42±0.59	2.53±0.87	3.75±0.50	3.67±0.33	3.72±0.44
Solarize: Bräunungs Timer	3.03±0.47	2.33±0.24	3.17±0.33	3.33±0.88	3.28±0.93
SkinVision	4.21±0.45	3.60±0.64	4.25±0.17	4.67±0.33	4.33±0.75
Sunface – UV-Selfie	3.96±0.19	4.07±0.43	4.17±0.19	3.78±0.69	3.81±0.57
UV-Check	3.27±0.37	3.27±0.49	2.75±0.17	3.56±0.19	3.52±0.63
UVLens – UV Index Voraussage (Android), UV Lens – UV Index (iOS)	4.33±0.27	4.07±0.55	4.42±0.17	4.67±0.33	4.16±0.84
UV Radiation now	3.14±0.25	2.87±0.90	3.25±0.57	3.44±0.19	3.00±0.92

*The dimensions are evaluated on a 5-point scale ranging from 1 to 5 (1=inadequate, 2=poor, 3=acceptable, 4=good, and 5=excellent).

Table SIV. Correlations among total Mobile App Rating Scale (MARS) score, 4 MARS dimension scores, and number of features

Characteristics	MARS Overall	Engagement	Functionality	Aesthetics	Information	Number of features
MARS						
Overall	1.00					
Engagement	0.85**	1.00				
Functionality	0.88**	0.67**	1.00			
Aesthetics	0.95**	0.76**	0.79**	1.00		
Information	0.87**	0.56*	0.69**	0.82**	1.00	
Number of features	−0.08	−0.38	−0.09	0.00	0.19	1.00

**=$p < 0.01$, *=$p < 0.05$.

Table SV. Inter-item correlation between the 3 reviewers for assessment of the individual items of the Mobile App Rating Scale (MARS)

	Reviewer 1	Reviewer 2	Reviewer 3
Reviewer 1	1.000	0.505	0.682
Reviewer 2	0.505	1.000	0.575
Reviewer 3	0.682	0.575	1.000