

Supplementary Online Content

Phillips M, Marsden H, Jaffe W, et al. Assessment of accuracy of an artificial intelligence algorithm to detect melanoma in images of skin lesions. *JAMA Netw Open*. 2019;2(10):e1913436. doi:10.1001/jamanetworkopen.2019.13436

eTable. Biopsied Lesion Characteristics

eFigure 1. STARD Flow Chart

eFigure 2. ROC Curves of Algorithm Performance Following Retraining

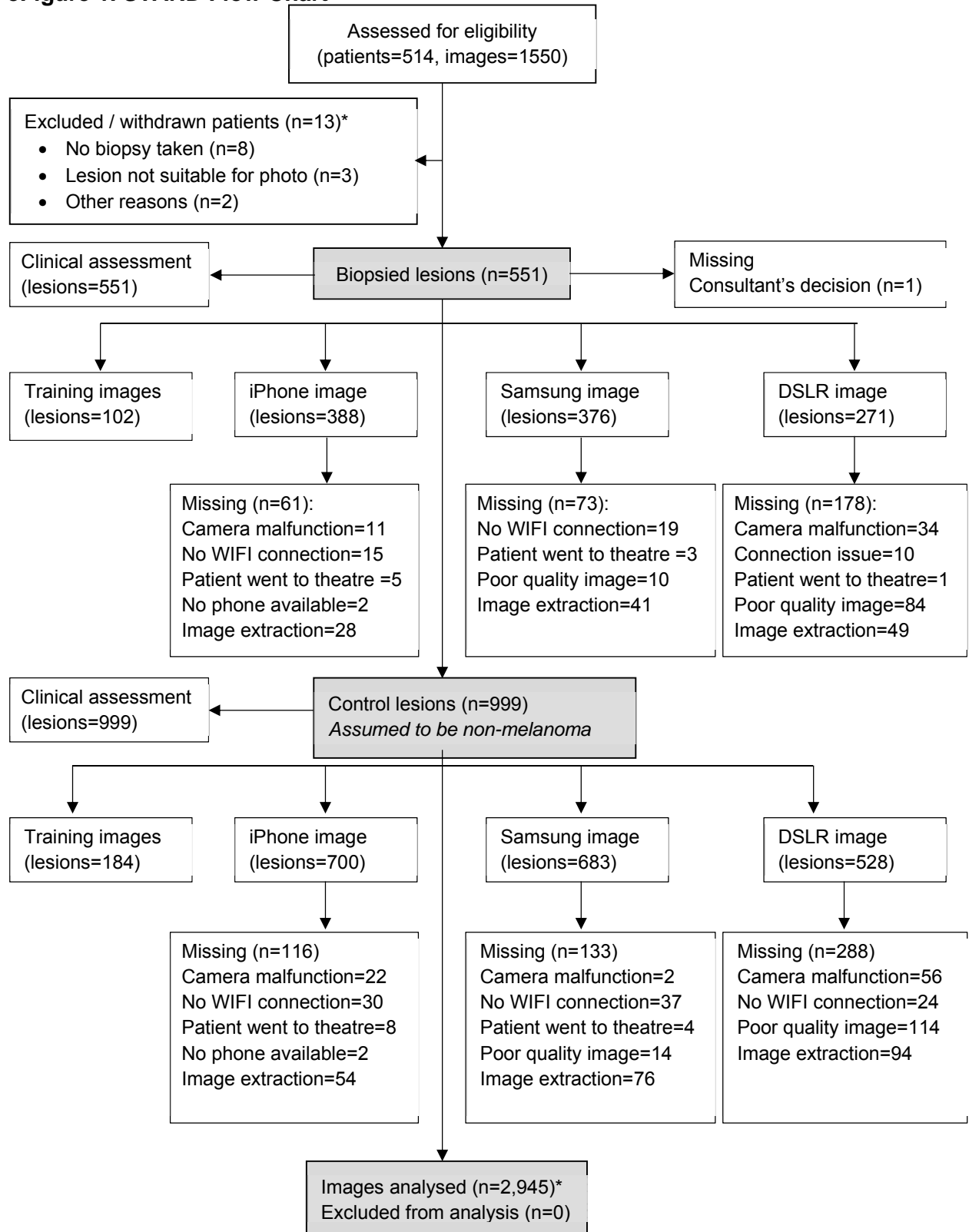
This supplementary material has been provided by the authors to give readers additional information about their work.

eTable. Biopsied Lesion Characteristics

Variable	Category	.	Percent
Lesion diameter (Geometric mean diameter=6.75 mm (6.49-7.02))	< 5 mm	110	20.0%
	5-9 mm	266	48.3%
	10-14 mm	155	28.1%
	≥15 mm	20	3.63%
	Total	551	100%
Body location	Head and Neck	87	15.8%
	Anterior Chest	95	17.2%
	Posterior Chest	171	31.0%
	Arms	97	17.6%
	Legs	92	16.7%
	Feet	9	1.7%
	Total	551	100%
Clinician assessment of likelihood of melanoma	Unlikely	124	22.5%
	Equivocal	269	48.8%
	Likely	108	19.6%
	Highly likely	50	9.1%
	Total	551	100%
Level of patient concern	Not concerned	170	75.5%
	Concerned	279	20.9%
	Very concerned	51	3.61%
	Missing	1	
	Total (not missing)	500	100%
Growth of lesion over 6 months	No change	108	26.9%
	Up to 20%	91	22.6%
	Between 20-50%	74	18.4%
	Over 50%	32	7.96%
	Arose de novo	28	6.97%
	Grown, unknown percentage	69	17.2%
	Missing	149	
	Total (not missing)	402	100%
Biopsy result	Other	278	50.5%
	Dysplasia	148	26.9%
	Melanoma	125	22.7%
	Total	551	100%
Melanoma subtype	Superficial spreading melanoma	67	52.3%
	Melanoma in situ	24	24%
	Lentigo maligna	10	7.81%
	Nodular melanoma	9	7.03%
	Nevoid melanoma	8	6.25%
	Spitzoid melanoma	3	2.34%
	Not given/ambiguous	2	1.56%
	Other	5	3.91%
Total	125	100%	
Breslow grade	≤1.0 mm	56	44.8%

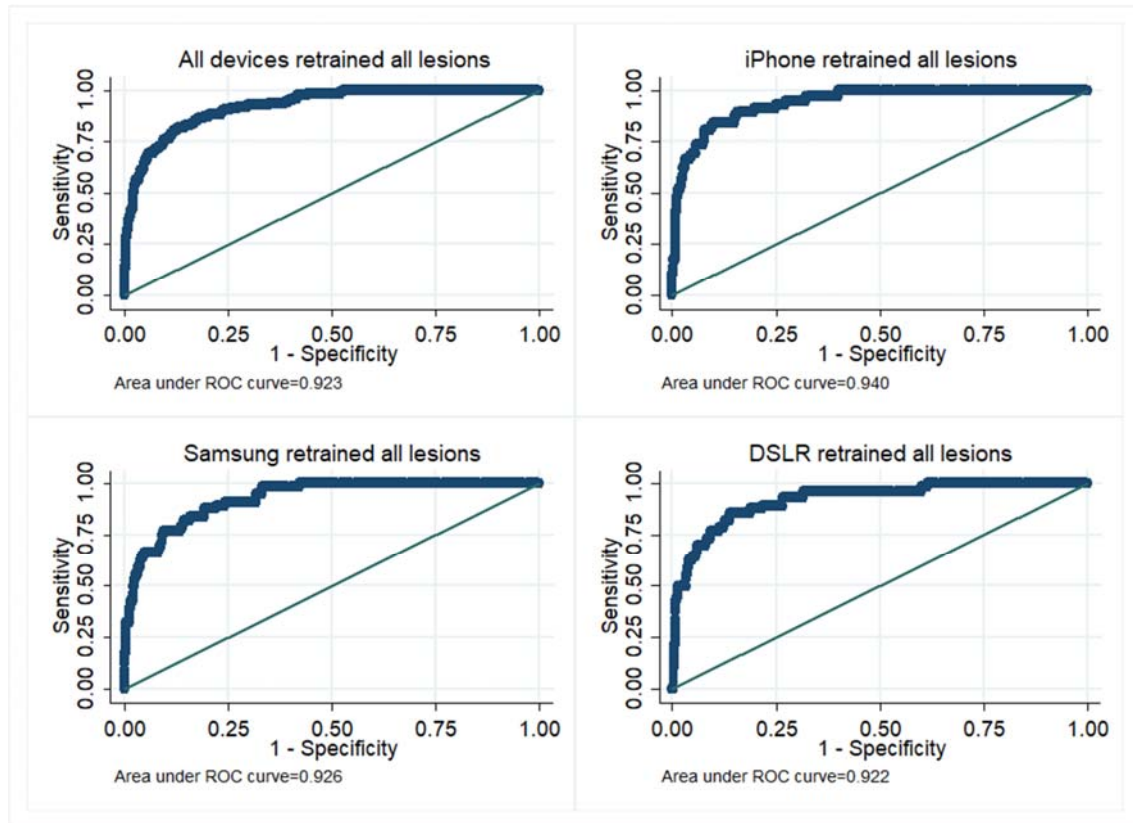
Variable	Category	.	Percent
	1.01-2.0 mm	17	13.6%
	2.01-4.0 mm	7	5.6%
	> 4.0 mm	8	6.4%
	Not given in histology report	37	29.6%
	Total	125	100%

eFigure 1. STARD Flow Chart



*where images were captured prior to withdrawal, these were used in the analyses

eFigure 2. ROC Curves of Algorithm Performance Following Retraining



Receiver Operator Characteristic (ROC) curves, using non-parametric estimation, for clinical assessment and algorithm assessment using images of all lesions. The algorithm had been trained using only two devices (DSLR and Samsung) and tested against all three devices (DSLR, Samsung and iPhone).