

## Supplementary Online Content

Piepkorn MW, Longton GM, Reisch LM, et al. Assessment of second-opinion strategies for diagnoses of cutaneous melanocytic lesions. *JAMA Netw Open*. 2019;2(10):e1912597. doi:10.1001/jamanetworkopen.2019.12597

**eTable 1.** Summary of Strategies Evaluated for Obtaining Second Opinion

**eTable 2.** Six Second Opinion Strategies Based on Initial Interpretation: Percentage Requiring Second and Third Opinions

**eTable 3.** Four Second Opinion Strategies Based on Primary and Consulting Pathologists' Experience: Percentage Requiring Third Opinions

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

<b>eTable 1.</b> Summary of Strategies Evaluated for Obtaining Second Opinion
<b>Strategy 1. Second opinion is applied to all skin biopsy cases</b>
<b>Second opinion obtained only if:</b>
Strategy 2. initial interpretations considered pT1b melanoma or greater (M-Path category V)
Strategy 3. initial interpretations considered melanoma pT1a or pT1b or greater (M-Path category IV or V)
Strategy 4. initial interpretations considered melanoma in situ or invasive melanoma (M-Path categories III MIS only, IV and V)
Strategy 5. initial pathologist desires a second opinion
Strategy 6. initial pathologist desires a second opinion or if it would be required by policy
<b>Evaluation restricted to cases read by initial pathologists with <u>no</u> board certification or fellowship training in dermatopathology (i.e., general pathologist):</b>
Strategy 7. with 2 <sup>nd</sup> and 3 <sup>rd</sup> brought in from another pathologist with no board certification or fellowship training in dermatopathology
Strategy 8. with 2 <sup>nd</sup> brought in from another pathologist with no board certification or fellowship training in dermatopathology, and 3 <sup>rd</sup> brought in from a board-certified and/or fellowship trained dermatopathologist
Strategy 9. with 2 <sup>nd</sup> and 3 <sup>rd</sup> brought in from a dermatopathologist with board certification and/or fellowship training in dermatopathology
<b>Evaluation restricted to cases read by initial dermatopathologists with board certification and/or fellowship training in dermatopathology:</b>
Strategy 10. with 2 <sup>nd</sup> and 3 <sup>rd</sup> brought in from a dermatopathologist with board certification and/or fellowship training in dermatopathology

**eTable 2.** Six Second Opinion Strategies Based on Initial Interpretation: Percentage Requiring Second and Third Opinions

Strategy	Rate, %					Overall
	M-Path Reference Consensus Diagnosis					
	Benign (I)	Moderately Dysplastic (II)	Severely Dysplastic/MIS (III)	pT1a melanoma (IV)	pT1b melanoma or greater (V)	
<b>SECOND OPINION APPLIED TO ALL CASES</b>						
<b>Strategy 1</b>						
% requiring 2 <sup>nd</sup> opinion	100.0	100.0	100.0	100.0	100.0	100.00
% requiring 3 <sup>rd</sup> opinion	13.4	45.6	56.6	59.4	33.5	45.2
<b>CRITERION FOR OBTAINING SECOND OPINION BASED ON INITIAL DIAGNOSIS</b>						
<b>Strategy 2. (Initial t1b)</b>						
% requiring 2 <sup>nd</sup> opinion	0.1	0.8	0.5	9.1	72.1	20.8
% requiring 3 <sup>rd</sup> opinion	0.1	0.8	0.5	7.0	12.8	5.2
<b>Strategy 3. (Initial t1a or t1b)</b>						
% requiring 2 <sup>nd</sup> opinion	0.4	2.8	5.5	51.9	86.2	36.3
% requiring 3 <sup>rd</sup> opinion	0.4	2.5	4.9	27.9	21.8	13.9

Strategy	Rate, %					Overall
	M-Path Reference Consensus Diagnosis					
	Benign (I)	Moderately Dysplastic (II)	Severely Dysplastic/MIS (III)	pT1a melanoma (IV)	pT1b melanoma or greater (V)	
<b>Strategy 4. (initial MIS, t1a or t1b)</b>						
% requiring 2 <sup>nd</sup> opinion	0.5	4.6	27.5	69.1	87.1	46.5
% requiring 3 <sup>rd</sup> opinion	0.5	4.0	12.9	36.2	22.6	18.4
<b>SECOND OPINION ONLY OBTAINED FOR CASES WHEN DESIRED OR REQUIRED BY POLICY OR BOTH</b>						
<b>Strategy 5. (second opinion desired)</b>						
% requiring 2 <sup>nd</sup> opinion	17.1	33.0	48.8	56.3	42.9	43.4
% requiring 3 <sup>rd</sup> opinion	5.6	19.9	28.8	35.4	20.1	24.4
<b>Strategy 6. (policy or desired)</b>						
% requiring 2 <sup>nd</sup> opinion	21.0	40.7	64.6	78.9	74.2	62.4
% requiring 3 <sup>rd</sup> opinion	6.4	24.2	37.2	47.6	27.5	32.1

**eTable 3.** Four Second Opinion Strategies Based on Primary and Consulting Pathologists' Experience: Percentage Requiring Third Opinions

Strategy	Rate, %					Overall
	M-Path Reference Consensus Diagnosis					
	Benign (I)	Moderately Dysplastic (II)	Severely Dysplastic/MIS (III)	pT1a melanoma (IV)	pT1b melanoma or greater (V)	
<b>Strategy 7. (1<sup>st</sup>, 2<sup>nd</sup> &amp; 3<sup>rd</sup> general pathologists)</b>						
% requiring 3 <sup>rd</sup> opinion	12.0	39.3	51.9	62.2	36.3	44.4
<b>Strategy 8. (1 and 2<sup>nd</sup> general pathologists, 3<sup>rd</sup> dermatopathologists)</b>						
% requiring 3 <sup>rd</sup> opinion	12.0	39.3	51.9	62.2	36.3	44.4
<b>Strategy 9. (1<sup>st</sup> general pathologist, 2<sup>nd</sup> &amp; 3<sup>rd</sup> dermatopathologists)</b>						
% requiring 3 <sup>rd</sup> opinion	14.0	48.3	61.4	60.6	33.2	47.1
<b>Strategy 10. (1<sup>st</sup>, 2<sup>nd</sup> &amp; 3<sup>rd</sup> dermatopathologists)</b>						
% requiring 3 <sup>rd</sup> opinion	15.2	51.7	52.3	48.5	27.8	41.2