





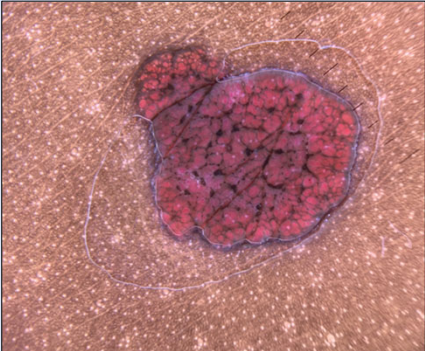
## Dermoscopy in Pediatrics: Finding the Scope


E. Vinny Seiverling MD  
Maine Medical Center Division of Dermatology  
Tufts University School of Medicine Department of Dermatology

Maine AAP Spring Conference  
**Innovations in Pediatric Healthcare**  
April 30, 2022










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## Dermoscopy in Pediatrics



- **What is dermoscopy?**
- **Why is it helpful?**
- **Utilization in adults vs kids, same vs different?**
- **eConsult and teledermoscopy**
- **What's next?**

*I have no financial conflicts of interest*



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## What is dermoscopy?

A non-invasive handheld device with up to 10x magnification

- **Reduces # of biopsies to detect melanomas (100 → 5)**
- **Aids in triage and improves early detection of skin cancer**
- **Requires training**



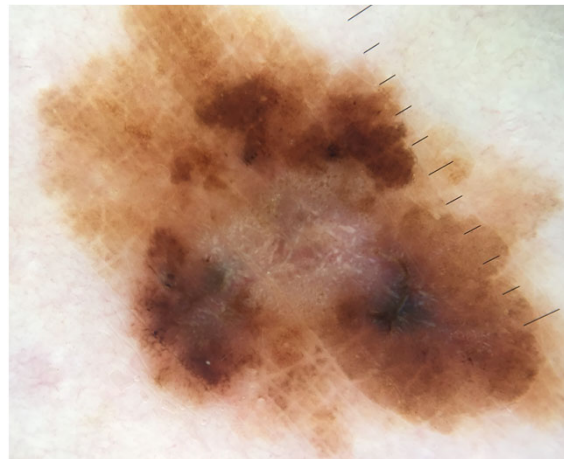
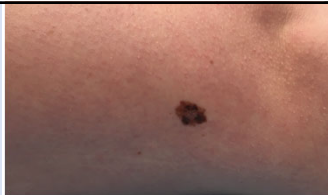
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## Dermoscopy → Reduction of # of biopsies in pediatric setting

- 30% of pediatric dermatology referrals are due to concerns regarding nevi
- Improve diagnostic accuracy – lower NNB --- Bx rate 100→20→5→3... (TBP, SDDI, confocal)
- Avoid general anesthesia or challenging biopsies in young children

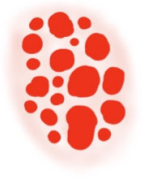
> Br J Dermatol. 2012 Aug;167(2):368–73. doi: 10.1111/j.1365-2133.2012.10952.x.

### Excised melanocytic lesions in children and adolescents – a 10-year survey

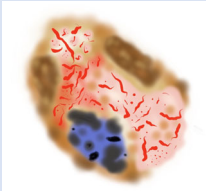
E Moscarella <sup>1</sup>, I Zalaudek, L Cerroni, I Sperduti, C Catricalà, J Smolle, R Hofmann-Wellenhof, A Sgambato, G Pellacani, G Argenziano

**Conclusions: 594 lesions were excised to find one melanoma. This value is 20 times higher than the rates found in adult patients.**

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## Dermoscopy Curricula



For Dermatologists

Research

JAMA Dermatology | Original Investigation

### Dermoscopy Proficiency Expectations for US Dermatology Resident Physicians

#### Results of a Modified Delphi Survey of Pigmented Lesion Experts

Lauren J. Fried, BS; Andrea Tan, MD; Elizabeth G. Berry, MD; Ralph P. Braun, MD; Clara Curiel-Lewandrowski, MD; Julia Curtis, MD; Laura K. Ferris, MD, PhD; Rebecca I. Hartman, MD, MPH; Natalia Jaimes, MD; John C. Kawaoka, MD; Caroline C. Kim, MD; Aimilios Lallas, MD, MSc, PhD; Sancy A. Leachman, MD, PhD; Alan Levin, MD; Patricia Lucey, MD; Michael A. Marchetti, MD; Ashfaq A. Marghoob, MD; Debbie Miller, MD; Kelly C. Nelson, MD; Edward Prodanovic, MD; Elizabeth V. Seiverling, MD; Susan M. Swetter, MD; Stephanie A. Savory, MD; Richard P. Usatine, MD; Maria L. Wei, MD, PhD; David Polsky, MD, PhD; Jennifer A. Stein, MD, PhD; Tracey N. Lieberman, MD

Melanoma

For Family Physicians

ORIGINAL RESEARCH

### Teaching Benign Skin Lesions as a Strategy to Improve the Triage Amalgamated Dermoscopic Algorithm (TADA)

Elizabeth V. Seiverling, MD, Hadyb T. Abrams, MD, Amrit Greene, MD, Melissa Butt, MPH, Oriol Yélamos, MD, Stephen W. Dusza, DrPH, and Ashfaq A. Marghoob, MD

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REVIEW ARTICLE Pediatric Dermatology WILEY

## A practical review of dermoscopy for pediatric dermatology part I: Melanocytic growths

Anshika Kaushik MD<sup>1,2</sup> | Nicola Natsis BA<sup>1,3</sup> | Samantha C. Gordon MD<sup>4</sup> | Elizabeth V. Seiverling MD<sup>4,5</sup>

<sup>1</sup>Division of Pediatric and Adolescent Dermatology, Rady Children's Hospital-San Diego, San Diego, CA, USA  
<sup>2</sup>Department of Dermatology, University of California San Diego School of Medicine, San Diego, CA, USA  
<sup>3</sup>University of California San Diego School of Medicine, San Diego, CA, USA  
<sup>4</sup>Department of Dermatology, Tufts Medical Center, Boston, MA, USA  
<sup>5</sup>Division of Dermatology, Maine Medical Center & Maine Medical Partners, Portland, ME, USA

**Abstract**  
 The value of dermoscopy in the detection of skin cancer is well established. Less is published on the utility of dermoscopy in the evaluation of pediatric skin disease. Our review (in two parts) aims to serve as an update on pediatric dermoscopy and to provide readers with a practical application for the use of dermoscopy in pediatric dermatology clinics. In part I, we propose a dermoscopy algorithm for pediatric skin disease and melanocytic growths, and in part II, we address vascular growths, common skin infections, and inflammatory conditions for which dermoscopy is valuable.

## A practical review of dermoscopy for pediatric dermatology part II: Vascular tumors, infections, and inflammatory dermatoses

Nicola E. Natsis BA<sup>1,2</sup> | Samantha C. Gordon MD<sup>3</sup> | Anshika Kaushik MD<sup>2,4</sup> | Elizabeth V. Seiverling MD<sup>3,5</sup>

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## Dermoscopy Workshops

- 2-hour dermoscopy workshops using TADA live & interactive or virtual
- 15 workshops, 250+ PCPs trained
- Power of partnership -- given with an FP & NP
- Establish PCP dermoscopy champion at each site
- Expanded curriculum to pediatrics – 78 pediatricians trained**
- Obtained **dermatoscopes for all sites**

**Evaluation of a virtual basic dermatology curriculum for dermoscopy by using the triage amalgamated dermoscopic algorithm for novice dermoscopists**

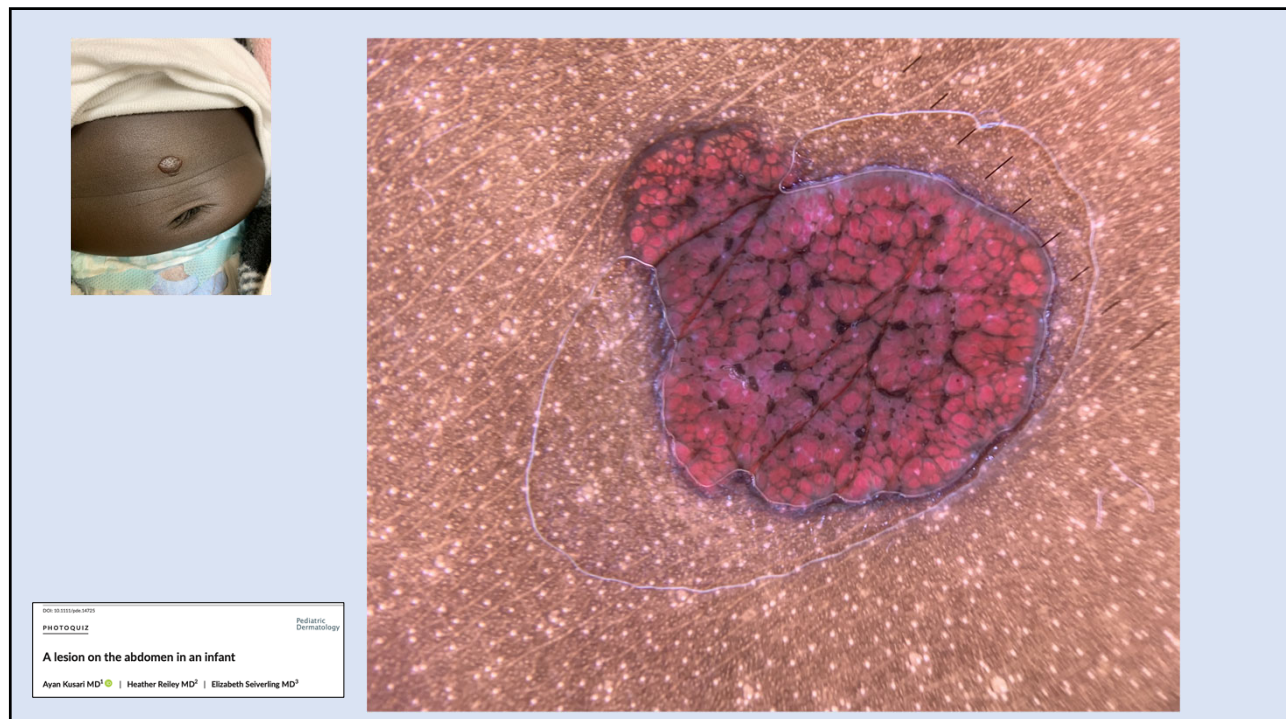
*To the Editor:* Dermoscopy involves the use of a single handheld tool that incorporates illumination and magnification for improved visualization of skin structures. However, dermoscopy requires a knowledge base to be properly interpreted. In studies with new dermoscopists, dermoscopy was shown to

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# Infantile Hemangioma

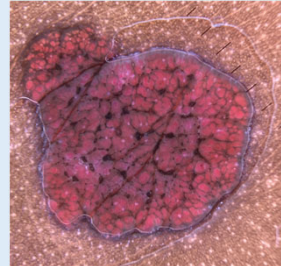
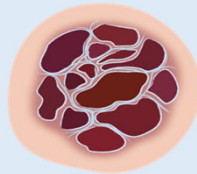
***Lacunae separated by septae***

***Colors:***

***Red***

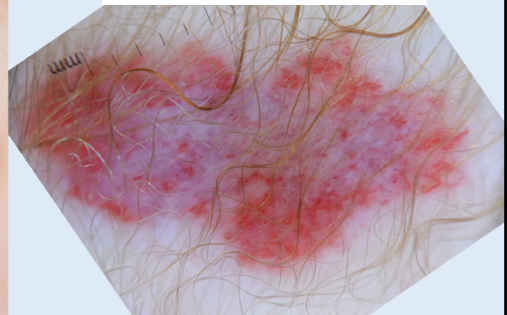
***Maroon***

***Blue***



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**'White hemangioma' harbinger of impending ulceration**

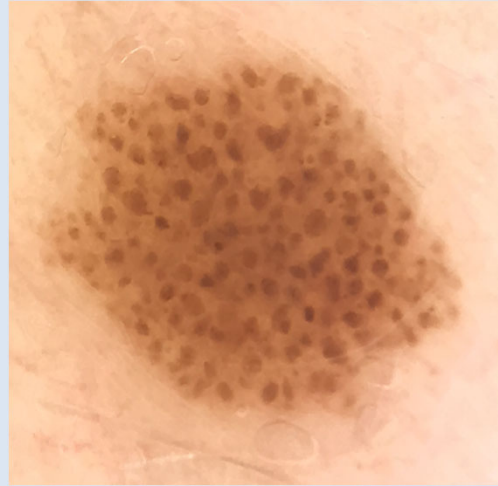
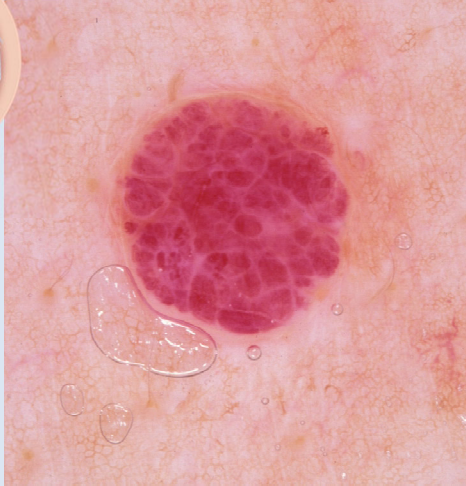
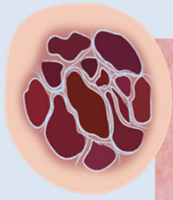


Maguiness SM, Hoffman WY, McCalmont TH, Frieden IJ. Early White Discoloration of Infantile Hemangioma: A Sign of Impending Ulceration. *Arch Dermatol.* 2010.

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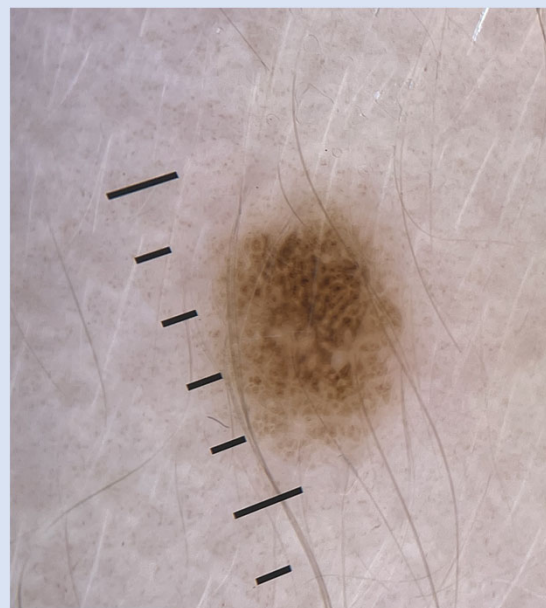
## Vascular vs Melanocytic



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### Seven-year-old boy with many nevi

Posterior  
neck nevus  
present  
since birth



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New scalp nevus. Many uniform brown globules under dermoscopy



*But it's new, enlarging and has irregular border?!?*



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## Nevogenesis and Nevus Evolution are Dynamic Processes in Kids

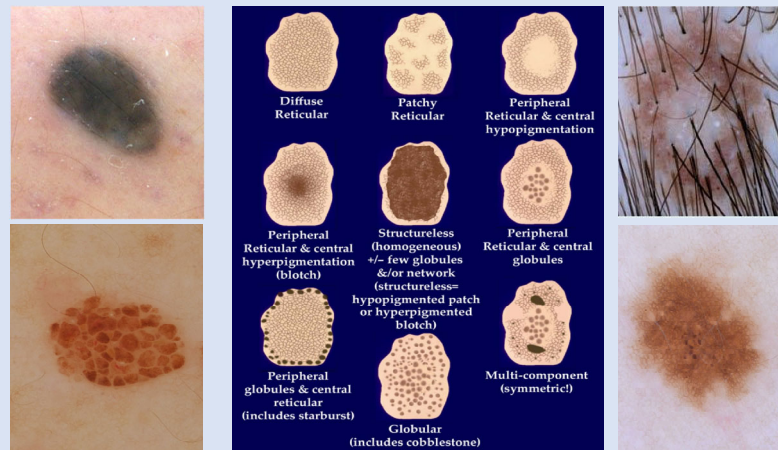


New Classification of Melanocytic Nevi  
Based on Dermoscopy  
Zalaudek. Expert Rev.  
Dermatol. 2008;3(4):477-489.

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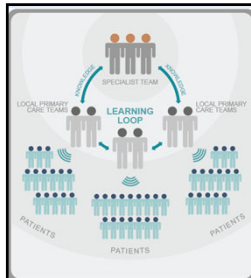


## Patterns of Benign Nevi



With this knowledge we begin to recognize the many patterns of benign nevi and that most of these (especially in children) do not need to be removed

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## eConsult with dermoscopy

### Dermatology e Consult:

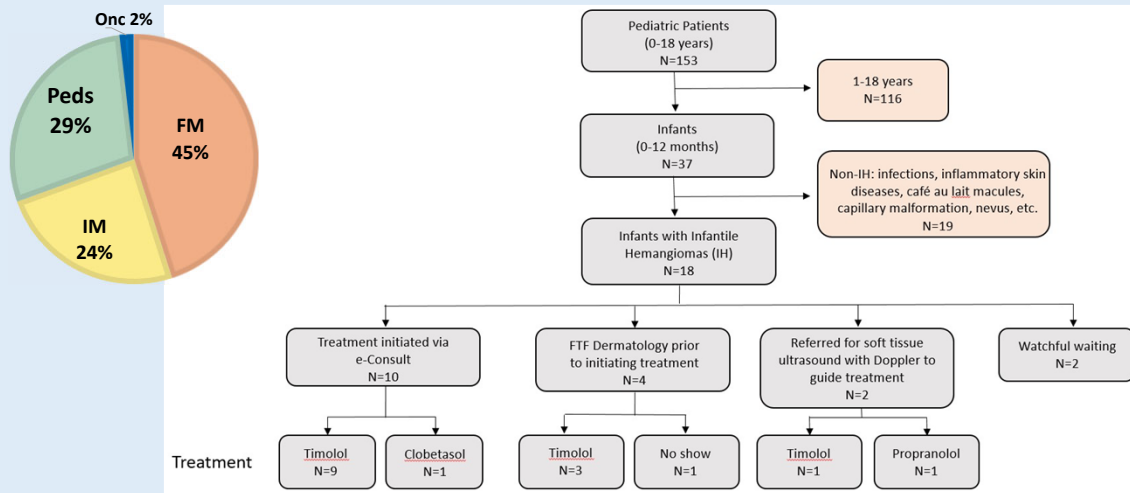
- Clinical consultation between PCP & specialist conveyed electronically via a secure messaging interface and store & forward imaging
- Form of telementoring– transfer knowledge not patients
- Create partnerships and learning loops to deliver care
- Helpful in rural areas with limited access to dermatology (there are no pediatric dermatologists in Maine)



*right care, right place, right time*

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## Pediatric eConsult sub-analysis



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## An opportunity to prevent ulceration and surgery...

MD to P MMP DERMATOLOGY E-CONSULT POOL

Hemangioma without bleeding or irritation. Is there an indication for treatment due to size and possibility of bleeding in future? 5/15/20 2:02 PM

**E-Consult Order**

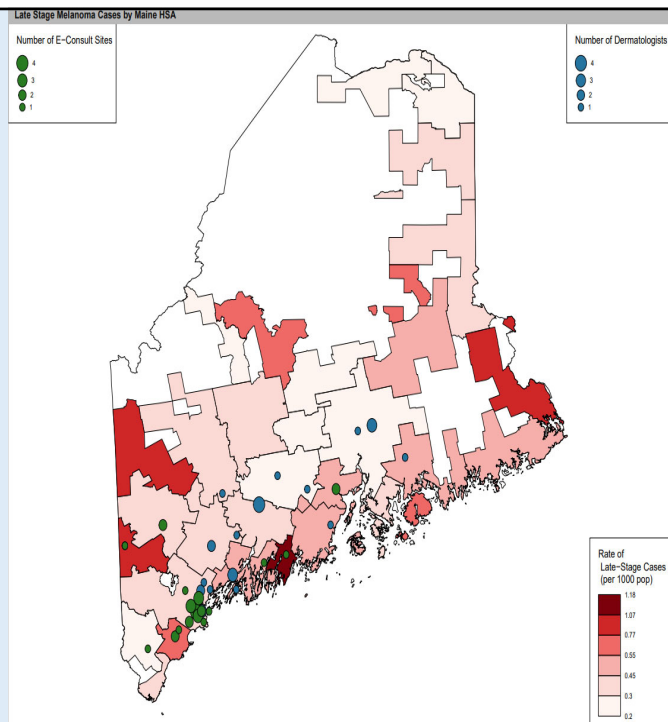
Question	Answer	Comment
Is the request for E-Consult due to a growth or rash?	Growth	
How long has the growth been present?	1-6 months	
Choose all that apply:	Enlarging or changing colors	
Prior biopsy?	No	
Prior Treatment?	No	
Organ or bone marrow transplantation, or other form of immunosuppression?	No	
Past medical history of skin cancer?	No past medical history	
Personal or family history of melanoma?	No	
Social history of tanning bed use?	No	
1) Far away anatomical image:	DOCUMENT	
2) Up close image:	DOCUMENT	
3) Dermoscopic polarized image:	DOCUMENT	
4) Dermoscopic non-polarized image:	DOCUMENT	

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How do we use this information to transform care?

- increase dermoscopy use in pediatrics and develop a pediatric dermoscopy training curriculum
- Dedicated pediatric eConsult platform
- Pediatric dermatologists in Maine



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Questions?



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