

Curriculum Vitae

Roberto A. Novoa, MD

I. ADDRESS AND CONTACT INFORMATION

Clinical Assistant Professor, Department of Pathology, Department of Dermatology
Stanford Dermatopathology Service
Department of Pathology - H2110
Stanford Medical Center
300 Pasteur Drive
Stanford, CA 94305

II. EDUCATIONAL BACKGROUND

07/2013-06/2014 Dermatopathology fellow, University of Pennsylvania.
07/2010-06/2013 Dermatology resident, University Hospitals-Case Medical Center. Case
Western Reserve University School of Medicine.
07/2009-06/2010 Medical intern, Department of Internal Medicine, New York Presbyterian-
Columbia University Medical Center
08/2004-06/2009 Harvard Medical School; M.D.
08/1999-06/2003 Harvard College; A.B., Government, *cum laude*

III. PROFESSIONAL APPOINTMENTS

09/2015-Present Clinical Assistant Professor, Departments of Pathology and Dermatology.
Stanford University
09/2014-08/2015 Clinical Instructor, Departments of Pathology and Dermatology. Stanford
University

IV. HONORS AND AWARDS

2017 Stanford Department of Dermatology Letter of Teaching Distinction.
2016 Hispanic Center of Excellence/Office of Faculty Development and
Diversity Faculty Fellowship
2016 American Academy of Dermatology Leadership Forum
2016 Stanford Predictives and Diagnostics Accelerator SPECTRUM Grant.
2015 Department of Pathology Research Grant. Stanford University.
2013 Dermatopathology Teaching Award, University Hospitals-Case Medical
Center
2011 American Academy of Dermatology Resident International Grant
2008 Harvard Medical School Paul Dudley White Traveling Fellowship
2003 Center for Public Interest Careers (CPIC) Fellowship
2003 Adams House Coat of Arms, Harvard College
2002 David Rockefeller Center for Latin American Studies Traveling Grant
2002 Weissman International Internship Grant

V. SCHOLARLY PUBLICATIONS

A. Peer-reviewed journal articles (original research)

- Vidal CI, Armbrect EA, Andea AA, Bohlke AK, Comfere NI, Hughes SR, Kim J, Kozel JA, Lee JB, Linos K, Litzner BR, Missall TA, **Novoa RA**, Sundram U, Swick BL, Yadira Hurley M; Rating Panel, Alam M, Argenyi Z, Duncan LM, Elston DM, Emanuel PO, Ferringer T, Fung MA, Hosler GA, Lazar AJ, Lowe L, Plaza JA, Prieto VG, Robinson JK, Schaffer A, Subtil A, Wang WL. Appropriate Use Criteria in Dermatopathology: Initial Recommendations from the American Society of Dermatopathology. *J Cutan Pathol*. 2018 Mar 22.
- Rahbar Z, Li S, Tavallaee M, **Novoa RA**, Kim J, Kim YH. Variability in the Expression of Immunohistochemical Markers: Implications for Biomarker Interpretation in Cutaneous T-Cell Lymphoma. *J Invest Dermatol*. 2017 Dec 14.
- Dai J, Kunder CA, Chu EY, Chan E, Egan CL, **Novoa RA**. Development of RET mutant cutaneous angiosarcoma during BRAF inhibitor therapy. *J Cutan Pathol*. 2017 Dec;44(12):1053-1056
- Esteva A, Kuprel B, **Novoa RA**, Ko J, Swetter S, Blau H, Thrun S. Dermatologist-level Classification of Skin Cancer with Deep Neural Networks. *Nature*. 2017 Feb ;542(115-118)
- Cedeno-Laurent F, Wysocka M, Obstfeld AE, **Novoa RA**, Vittorio CC, Kim EJ, Weng WK, Rook AH. Gain of CD26 expression on the malignant T-cells in relapsed erythrodermic leukemic mycosis fungoides. *J Cutan Pathol*. 2017 Jan 13.
- Berg SA, **Novoa RA**, Stewart C, Sobanko JF, Miller CJ, Rosenbach M. Sarcoidosis and squamous cell carcinoma: a connection documented in a case series of 3 patients. *Cutis*. 2016 Dec;98(6):377-380.
- Cornejo CM, **Novoa RA**, Krisch RE, Kim EJ. Low-dose radiotherapy for primary cutaneous anaplastic large-cell lymphoma while on low-dose methotrexate. *Cutis*. 2016 Oct;98(4):253-256.
- Jaju P, **Novoa RA**, Swetter SM, Sarin KY. Invasive Melanoma in a Patient with Congenital Ichthyosiform Erythroderma. *Pediatr Dermatol*. 2016 Nov 4.
- Khosla D, **Novoa RA**, Merati M, Honda K, Gerstenblith MR. Multiple eccrine axillary hidrocystomas. *JAAD Case Rep*. 2016 Jul 5;2(3):257-8
- Epidermotropic metastasis of primary lung adenocarcinoma. Scott G, Kwong B, **Novoa RA**. *Journal of Cutaneous Pathology*. 2016 May 28.
- Schaberg KB, **Novoa RA**, Wakelee HA, Kim J, Cheung C, Srinivas S, Kwong B. Lichenoid Reactions in Patients Treated with Anti-PD-L1 and Anti-PD-1 Therapy. *Journal of Cutaneous Pathology*. 2016 Jan 13.

- Tan C, **Novoa RA**, Chen J. Erythematous plaques on the buttock. *JAMA Dermatology*. 2016 Jan 5;315(1):79-80.
- Leatham HW, **Novoa RA**, Liedtke M, Kwong B. Recurrent Subepidermal Blistering Dermatitis Heraldng Disease Relapse in IgA kappa Multiple Myeloma: Report of a case and a review of the literature. *Clin Lymphoma Myeloma Leuk*. 2015 Nov 22. pii: S2152-2650(15)01377-4.
- Boos MD, Wine Lee L, Freedman JL, **Novoa RA**, Chu EY, Perman MJ. Presentation of Acute Megakaryoblastic Leukemia Associated with a GATA-1 Mutation Mimicking the Eruption of Transient Myeloproliferative Disorder. *Pediatr Dermatol*. 2015 Sep-Oct;32(5):e204-7.
- Rangel JR, **Novoa RA**, C, Morrison CA, Frank DM, Kovarik CL. Fistulizing EBV-Positive Plasmablastic Lymphoma in an HIV-Positive Male. *British Journal of Dermatology* 2015 Aug 19. doi: 10.1111/bjd.14089.
- Langenhan J, **Novoa RA**, Pappas-Taffer L. Acquired port wine stain and associated eczema after penetrating trauma. *Cutis* 2015 Dec;96(6):391-4.
- MacArthur KM, Richardson V, **Novoa RA**, Stewart CL, Rosenbach M. Carpet Beetle Dermatitis: a possibly under-recognized entity. *International Journal of Dermatology* 2015 Oct 16. doi: 10.1111/ijd.12952
- Novoa RA**, Wanat KA, Rosenbach M, Frey N, Frank DM, Elenitsas R. Erythrodermic leukemia cutis in a patient with pre-B cell acute lymphoblastic leukemia. *American journal of Dermatopathology*. 2015 Aug;37(8):650-2.
- Kittridge A, Patel R, **Novoa R**, Tamburro J. Herlitz Junctional Epidermolysis Bullosa with a Novel Mutation in LAMB3. *Pediatric Dermatology*. 2014 Jul-Aug;31(4):530-2
- Novoa RA**, Kovarik CL, Low DW, Argenyi Z. Cutaneous epithelioid melanocytoneurofibroma arising in a patient with neurofibromatosis-1. *Journal of Cutaneous Pathology*. 2014 May;41(5):457-61.
- Novoa RA**, Honda K, Campagnaro E, Gerstenblith MR. Hypertensive emergency, mat-like telangiectasias, and calciphylaxis in POEMS syndrome. *JAMA Dermatology*. 2014 Jun;150(6):667-9
- Paun O, Philips T, **Novoa RA**, Honda KS, Lu KQ, Lazarus HM. Cutaneous complications in hematopoietic cell transplant recipients: impact of biopsy on patient management. *Biology of Blood and Marrow Transplantation* 2013 Aug;19(8):1204-9
- Petukhova TA, **Novoa RA**, Honda K, Koon HB, Gerstenblith MR. Acneiform eruptions associated with vemurafenib. *Journal of the American Academy of Dermatology* 2013 Mar;68(3):e97-9
- Novoa RA**, Honda K, Koon H, Gerstenblith MG. Panniculitis and vasculitis associated with vemurafenib. *Journal of the American Academy of Dermatology*. 2012 Dec;67(6):e271-2

Novoa R, Bacellar O, Nascimento M, Cardoso TM, Ramasawmy R, Oliveira WN, Schriefer A, Carvalho EM. IL-17 and regulatory cytokines (IL-10 and IL-27) in *L. braziliensis* infection. *Parasite Immunology* 2011 Feb;33(2):132-6

Novoa RA, Shaffer K. Meckel's diverticulitis presenting with abdominal pain and angina. *Radiology Case Reports*. 2008;3:166

Novoa RA, Ompad DC, Wu Y, Vlahov D, Galea S. Ecstasy use and its association with sexual behaviors among drug users in New York City. *Journal of Community Health*. 2005 Oct;30(5):331-43

B. Peer-reviewed publications other (i.e. editorials, commentaries, etc.)

Narla A, Kuprel B, **Novoa RA**, Ko JM. Automated Classification of Skin Lesions: From Pixels to Clinical Practice. *Journal of Investigative Dermatology*. Editorial. (*In Press*)

D. Book Chapters

Kim J, Rieger K, **Novoa RA**. Anatomic and Clinical Pathology Board Review. Second edition. Ahmed AA and Przygodzki RM eds, Philadelphia, PA: Wolter Kluwer Health; 2017

Stewart CL, **Novoa RA**. Pyoderma Gangrenosum. *Hematopathology of the Skin*. First edition. Schaffer A ed, Philadelphia, PA: Wolter Kluwer Health; 2016

Stewart CL, **Novoa RA**, Seykora JT. Tumors of the Epidermal Appendages. *Lever's Histopathology of the Skin*. Eleventh edition. Elder DE, Elenitsas R, eds Philadelphia, PA: Lippincott Williams & Wilkins; 2014

Novoa RA, Herran MI. Visceral Leishmaniasis. *Atlas of Pediatrics in the Tropics and Resource-limited Settings*. Spector, J, Gibson, T, eds Elk Grove Village, IL: American Academy of Pediatrics; 2009

H. Abstracts

Brown RA, McCalmont TH, Kim YH, Kim J, **Novoa RA**. Expression of CD56 in an epidermotropic plasma cell neoplasm: Two diagnostic pitfalls. *American Society of Dermatopathology Annual Meeting*. October 26-29, 2017.

Ko YCK, Peters S, Kunkle T, Perrino M, Philipone E, **Novoa R**. Oral manifestations of Lipoid Proteinosis in an 11-year-old Girl. *American Society of Dermatopathology Annual Meeting*. October 26-29, 2017.

Moshiri AS, **Novoa R**, Takeshita J, et al. Comparison of C3d immunohistochemistry, direct immunofluorescence, and indirect immunofluorescence in the diagnosis of bullous pemphigoid. *Journal of investigative dermatology* 137.5 (2017):S38-S38. Annual Meeting of the Society-for-Investigative-Dermatology (SID). Portland, OR: APR 26-29, 2017

Li Y. Esteva CA. **Novoa RA**. Skin cancer detection and tracking using data synthesis and deep learning. *NIPS Machine Learning for Health Care Workshop*. Barcelona. December 5-10, 2016

- Rodriguez V, Roy K, Yost JM, **Novoa RA**. Nail dystrophy in systemic amyloidosis. American Society of Dermatopathology Annual Meeting. October 26-29, 2016.
- Lang U, De Stefano D, Almazan T, Kim Y, **Novoa, R**. Papillomatous mycosis fungoides mimicking inflamed seborrheic keratosis: a rare diagnosis confirmed via high-throughput sequencing. American Society of Dermatopathology Annual Meeting. October 26-29, 2016.
- Bailey E, Kwong B, **Novoa RA**. Necrotizing fasciitis presenting with unilateral retiform purpura: An unusual clinical presentation of a life-threatening condition. American Society of Dermatopathology Annual Meeting. October 8-11, 2015.
- Bartlett E, Wilson M, Morrissette J, **Novoa R**, Zaheer S, Cintolo JA, Olson TL, Schuchter L, Amaravadi R, Gangadhar T, Elder DE, Xu X, Wei X, Nathanson K, Czerniecki B, Fraker DL, Karakousis G. A high rate of TP53 mutation identified in patients with advanced melanoma using next generation sequencing. Society for Surgical Oncology. March 25-28, 2015. Houston, TX.
- Novoa RA**, Rangel J, Kovarik CL. Fistulizing EBV-positive plasmablastic lymphoma in an HIV-positive male. American Society of Dermatopathology Annual Meeting. October 10-13, 2013. Washington, D.C..
- Novoa RA**, Elenitsas R, Rosenbach M. Erythrodermic leukemia cutis in a patient with pre-B cell acute lymphoblastic leukemia. American Society of Dermatopathology Annual Meeting. October 10-13, 2013. Washington, D.C..
- Paun OV, Phillips TJ, Fu P, **Novoa R**, Honda K, Lu KQ, Lazarus HM. Cutaneous complications in hematopoietic cell transplant recipients: Impact of biopsy on patient management. J Clin Oncol 31, 2013 (suppl; abstr 7036).
- Novoa RA**, Honda K, Pavlidakey P, Campagnaro E, Gerstenblith MR. Atypical POEMS syndrome and calciphylaxis. American Society of Dermatopathology Annual Meeting. October 13, 2012. Chicago, IL
- Novoa RA**, Honda K, Koon HB, and Gerstenblith MR. Vasculitis and panniculitis associated with vemurafenib. International Skin Carcinogenesis Conference Annual meeting. June 22, 2012. Columbus, OH
- Novoa RA**, Honda K, Koon HB, and Gerstenblith MR. Neutrophilic dermatoses associated with vemurafenib. Society for Investigative Dermatology Annual Meeting. May 12, 2012. Raleigh, NC
- Novoa RA**, Khosla D, Gerstenblith M, Honda K. Multiple Axillary eccrine hidrocystomas. American Society of Dermatopathology Annual Meeting, October 20, 2011. Seattle, WA.
- Ompad D, Vlahov D, Deamues H, Chan C, **Novoa RA**, Galea S, Fuller C. Scratching and squeezing cutaneous lesions in others as possible HCV and HIV transmission risk. AIDS 2006 - XVI International AIDS Conference, Toronto, Canada: Abstract no. CDC0116.

VI. EDITORIAL SERVICES

A. Editorial board memberships

2018 Guest Editor. Seminars in Cutaneous Medicine and Surgery. “Informatics and Dermatology.” March 2019.

B. Other peer review activities

2017-Present Reviewership (ad hoc). JAMA Dermatology
 2017-Present Reviewership (ad hoc). Journal of Cutaneous Pathology
 2017-Present Reviewership (ad hoc). Journal of Investigative Dermatology
 2017-Present Reviewership (ad hoc). PLOS Medicine
 2016-Present Reviewership (ad hoc). British Journal of Dermatology
 2016-Present Reviewership (ad hoc). International Journal of Dermatology
 2016-Present Reviewership (ad hoc). Transplant Infectious Disease

VII. GRANTS

A. Current Funding

01/2018-Present Co-investigator. “Nociceptive Sensory Neuron/Mast Cell Interactions, RabGEF1, and MyD88 Signaling in Human Atopic Dermatitis.” NIH Grant R01AR067145.
 01/2018-Present Co-investigator. “Role of nociceptive sensory neuron/mast cell interactions in cutaneous allergic inflammation.” NIH Grant R01AI132494.
 1/2018-Present PI. Stanford Department of Pathology. “Predicting melanoma metastasis patterns using p14ARF, p16, p53, and BAP1 immunohistochemistry.” Pathology Trainee Mentored Award in Precision Medicine.
 1/2018-Present Co-PI. Change Detection of Cutaneous Lesions using Image Capture and Machine Learning. Private Donation- Dr. Vanessa Vu.

C. Prior Funding

2016 Co-PI. Stanford Predictives and Diagnostics Accelerator SPECTRUM Grant. “Sentry AI: Harnessing machine learning for the early detection and diagnosis of melanoma.” 1 year.
 2015 Co-PI. Department of Pathology Research Grant. Stanford University. “Immunohistochemical Evaluation of Lichenoid Reactions in Patients on PD-1 and PD-L1 Inhibitors.” 1 year.

X. UNIVERSITY ADMINISTRATIVE SERVICE

A. Committee Membership

2018-Present EPIC Beaker Evaluation Task force. Stanford Department of Pathology.
 2017 Digital Pathology Task force. Stanford Department of Pathology
 2017 Information Technology for Imaging Research Task force. Stanford School of Medicine

B. Leadership:

2018-Present Associate program director. Dermatopathology fellowship program.

XI. SERVICE TO PROFESSIONAL ORGANIZATIONS

A. Membership

2012-Present American Society of Dermatopathology

2010-Present American Academy of Dermatology

B. Committee service

2016-Present Member, Appropriate Use Criteria Committee. American Society of Dermatopathology

XII. PRESENTATIONS

A. National and Regional

- 2018 “Artificial Intelligence, Deep Learning, and the Future of Dermatology.” Melanoma Awareness Day. Walter Reed National Military Medical Center. May 10.
- 2018 “Hickam’s Dictum and the Cancer Patient.” Dermpedia Non-Neoplastic Skin Disease Conference. April 13.
- 2018 Inflammatory Mimics of Mycosis fungoides. Dermpedia Non-Neoplastic Skin Disease Conference. April 13.
- 2018 “DRESS Syndrome.” Dermpedia Non-Neoplastic Skin Disease Conference. April 12.
- 2018 “Artificial Intelligence in Image Analysis.” Dermpedia Non-Neoplastic Skin Disease Conference. April 12.
- 2018 “Dermatological Applications of Artificial Intelligence: Promise and Pitfalls.” American Academy of Dermatology Meeting. February 19.
- 2018 IgG4-Related disease: Puzzles and Pitfalls. AAD. American Academy of Dermatology Meeting. February 18.
- 2018 “Dermatological Applications of Artificial Intelligence: Promise and Pitfalls.” American Academy of Dermatology Meeting. February 19.
- 2017 “Artificial Intelligence, Deep Learning, and Dermatology.” International Pigment Cell Conference. August 29.
- 2017 “Introducing Stanford’s Plan for Applying Artificial Intelligence to Melanoma Early Detection.” International Pigment Cell Conference. August 28.
- 2017 “Clinicopathologic Self-Assessment.” Summer American Academy of Dermatology Meeting. July 27

- 2017 “Deep Learning and Dermatology.” Invited speaker. Harvard Combined Dermatology Program Annual Retreat. July 18.
- 2017 “Artificial Intelligence, Deep Learning, and the Future of Dermatology.” Invited speaker. Kansas City Dermatological Society. May 18.
- 2017 “Cutaneous Manifestations of HIV Infection.” Highland Hospital Department of Internal Medicine Grand Rounds. March 24
- 2017 “Challenging Cases in Dermatopathology.” American Academy of Dermatology. March 3.
- 2017 “Artificial Intelligence in Dermatology.” Dermatology Innovation Forum. March 2.
- 2016 “Infectious diseases- Every Rash isn’t Maculopapular.” Department of infectious diseases grand rounds. Stanford University. September 8.
- 2016 “Challenging Cases in Dermatopathology.” Summer American Academy of Dermatology Meeting. July 31.
- 2016 “Advances in Cutaneous Lymphoma.” Summer American Academy of Dermatology Meeting. July 28.
- 2015 Novoa RA. “Challenging Dermatopathology Cases.” Summer American Academy of Dermatology Meeting. August 22.
- 2014 Novoa RA, Simpson C, Takeshita J, Chu EY. “Diagnostic utility of C3d immunohistochemical staining in the diagnosis of bullous pemphigoid.” American Society of Dermatopathology Annual Meeting. Chicago, IL. November 6.
- 2014 “Inflammatory skin disease.” Human Health and Disease block. Stanford Medical School. October 17.
- 2013 “Medical dermatology and clinical-pathologic correlation in the developing world.” Department of pathology. Stanford University Medical Center. November 11.
- 2011 “POEMS Syndrome with calciphylaxis.” Cleveland Dermatological Society Meeting. University Hospitals- Case Medical Center. Cleveland, OH. September 15.
- 2011 “Nodular amyloidosis.” Cleveland Dermatological Society Meeting. University Hospitals- Case Medical Center. Cleveland, OH. September 15.
- 2010 “Disseminated superficial actinic prokeratosis.” Cleveland Dermatological Society Meeting, University Hospitals- Case Medical Center. Cleveland, OH September 16.
- 2010 “Medical education- lessons from David.” David Magoon Memorial Lecture. Aultman Hospital. Canton, OH. February 25.

D. Select Media Appearances

- 2018 “Can We Build a Brain?” *Nova*. PBS. May 16.
- 2018 “Should Dermatologists Fear Machine Learning?” Bowers J. *Dermatology World*. February.
- 2018 “The Artificial Brain as Doctor.” Hilton L. *Dermatology Times*. January 1.
- 2017 “Computers Turn Medical Sleuths and Identify Skin Cancer.” Akst D. *Wall Street Journal*. February 10.
- 2017 “‘Automated Dermatologist’ Detects Skin Cancer with Expert Accuracy.” Scutti S. CNN.com January 26.

XIII. COMMUNITY SERVICE

- 2017-Present Stanford University Pre-major advisor
- 2014-Present Stanford volunteer skin screening
- 2012 Dermatology volunteer, Princess Marina Hospital. Gaborone, Botswana
- 2009 Medical student volunteer, Mulago Hospital, Makerere University. Kampala, Uganda
- 2004-2006 Non-resident medical tutor, Adams House. Harvard College
- 2002 Weissman Intern. Health Frontiers, Mahosot Hospital, Vientiane, Laos
- 2001-2002 Co-Director, Boston Refugee Youth Enrichment (BRYE) Mentoring
- 2000-2001 Assistant Director, BRYE Mentoring
- 2000-2003 Mentor, BRYE Mentoring
- 2000 Tutor, BRYE Tutoring
- 1999 English teacher, BRYE Summer Program