



Publications

Early Technical Publications on ESS Effectiveness for Skin Cancer Diagnosis

Rodriguez-Diaz E, Manolakos D, Christman H, Bonning MA, Geisse JK, A'Amar OM, Leffell DJ, Bigio IJ. Optical Spectroscopy as a Method for Skin Cancer Risk Assessment. *Photochem Photobiol.* 2019 Nov;95(6):1441-1445. doi: 10.1111/php.13140. Epub 2019 Aug 24. PMID: 31287160.

Upile T, Jerjes W, Radhi H, Mahil J, Rao A, Hopper C. Elastic scattering spectroscopy in assessing skin lesions: an "in vivo" study. *Photodiagnosis Photodyn Ther.* 2012 Jun;9(2):132-41. doi: 10.1016/j.pdpdt.2011.12.003. Epub 2011 Dec 27. PMID: 22594983.

J. Scarisbrick, C. Pickard, A. Lee, G. Briggs, K. Johnson, S. Bown, M. Novelli, M. Keshtgar, I. Bigio, and R. Yu. "ELASTIC SCATTERING SPECTROSCOPY IN THE DIAGNOSIS OF PIGMENTED LESIONS: COMPARISON WITH CLINICAL AND HISTOPATHOLOGICAL DIAGNOSIS," in *Diagnostic Optical Spectroscopy in Biomedicine II*, G. Wagnières, ed., Vol. 5141 of Proc. SPIE (Optica Publishing Group, 2003), paper 5141_147.

Publications on the Current ESS Device and FDA Cleared Algorithm v3.0

Tepedino M, Baltazar D, Hanna K, Bridges A, Billot L, Zeitouni N. Use of Elastic Scattering Spectroscopy on Patient-Selected Lesions that are Concerning for Skin Cancer. *JABFM* (2024)

Hartman RI, Trepanowski N, Chang MS, Tepedino K, Gianacas C, McNiff JM, Fung M, Braghiroli NF, Grant-Kels JM, Multicenter Prospective Blinded Melanoma Detection Study with a Handheld Elastic Scattering Spectroscopy Device, *JAAD International* (2023), doi: <https://doi.org/10.1016/j.jdin.2023.10.011>.

Jaklitsch E, Thames T, de Campos Silva T, Coll P, Oliviero M, Ferris LK. Clinical Utility of an AI-powered, Handheld Elastic Scattering Spectroscopy Device on the Diagnosis and Management of Skin Cancer by Primary Care Physicians. *J Prim Care Community Health.* 2023 Jan-Dec;14:21501319231205979. doi: 10.1177/21501319231205979. PMID: 37933569; PMCID: PMC10631325.

Manolakos D, Patrick G, Geisse JK, Rabinovitz H, Buchanan K, Hoang P, Rodriguez-Diaz E, Bigio IJ, Cagnetta AB. Use of an Elastic-Scattering Spectroscopy and Artificial Intelligence Device in the Assessment of Lesions Suggestive of Skin Cancer: A Comparative Effectiveness Study, *JAAD International* (2023), doi: <https://doi.org/10.1016/j.jdin.2023.08.019>.

Publications that Review the Current ESS Device and Other Skin Lesions Analyzer Devices

Webster P. How AI-powered handheld devices are boosting disease diagnostics - from cancer to dermatology. Nat Med. 30(4):914-915. (2024) doi:10.1038/d41591-024-00016-2

Venkatesh, K.P, Kadakia, K.T. & Gilbert, S. Learnings from the first AI-enabled skin cancer device for primary care authorized by FDA. npj Digit. Med. 7, 156 (2024). <https://doi.org/10.1038/s41746-024-01161-1>

Beltrami EJ, Brown AC, Salmon PJM, Leffell DJ, Ko JM, Grant-Kels JM. Artificial intelligence in the detection of skin cancer. J Am Acad Dermatol. 2022 Dec;87(6):1336-1342. doi: 10.1016/j.jaad.2022.08.028. Epub 2022 Aug 23. PMID: 35998842.

Indexed Abstracts

Merry SP, McCormick B, Nguyen VL, Chatha K, Croghan I, Leffell D. DERM-SUCCESS: Clinical Validation of an Elastic Scattering Spectroscopy (ESS) Device in Assisting Primary Care Physicians' Detection of Skin Cancer. J Clin Aesthet Dermatol 2023 Dec: 16(4 Suppl): s16

Chatha, K, Christman, H, Thames, T, Geisse, J, Rabinovitz, H, Leffell, D Grant-Kels, J et al. The Effectiveness of a Handheld Elastic Scattering Spectroscopy (ESS) Device in Detecting Melanoma and Non-Melanoma Skin Cancers Journal of the American Academy of Dermatology, September 2023, Volume 89, Issue 3, AB233

Seiverling EV, Agresta T, Cyr P, Caines L, Nguyen VL, Chatha K, Siegel DM. Clinical Utility of an Elastic Scattering Spectroscopy Device in Assisting Primary Care Physician's Detection of Skin Cancers. J Clin Aesthet Dermatol 2023 April: 16(4 Suppl): s16-17.

Hartman R, Tepedino K, Fung, MA, McNiff, JM, Patrick G, Nguyen V, Chatha K, Grant-Kels J. Validation of a Handheld Elastic-scattering Spectroscopy Device on Lesions Suggestive of Melanoma. J Dermatol Physician Assist. 2022 Fall; 16(4):51.

Tepedino M, Baltazar D, Hucks C, Chatha K, Zeitouni N. Use of Elastic Scattering Spectroscopy on Patient Selected Lesions that are Concerning for Skin Cancer. Cutis 2022 December; 110(6 Suppl):35-36.

Merry SP, Croghan I, McCormick B, Chatha K, Leffell D. Clinical Performance of Novel Elastic Scattering Spectroscopy (ESS) in Detection of Skin Cancer: A Blinded, Prospective, Multi-Center Clinical Trial [Initial Results]. Cutis 2022 December; 110(6 Suppl):31.

Salmon P and Bonning M. Use of Elastic-Scattering Spectroscopy and Machine Learning when Assessing Skin Lesions Suggestive of Skin Cancer. J Dermatol Physician Assist. 2021 Fall 15(4):64-65.

Poster and Podium Presentation Citations

Merry S, Croghan I, Seiverling EV, Falk N, Rabinovitz H, Thames T, Chatha K, Leffell D. A Novel Elastic Scattering Spectroscopy Device Accurately Identifies Skin Lesions as High Risk for Cancer Among Those Deemed Equivocal by Primary Care Physicians. Poster Presentation, Maui Derm NPPA, Colorado Springs CO, June 19-22nd, 2024.

Merry SP, Agresta T, Seiverling EV, Ferris LK, McCormick B, Chatha K, Nguyen VL, Leffell DJ, Siegel DM, Croghan I. Can a Handheld Elastic Scattering Spectroscopy Device Aid Primary Care Physicians In Their Detection and Management of Skin Cancer? Poster Presentation, High Value Practice Academic Alliance Annual Conference, Baltimore, MD, Oct 12-15, 2023.

Leffell D, Croghan I, Rabinovitz H, Hucks C, Chatha K, Nguyen VL, Merry SP. Clinical Performance of Elastic Scattering Spectroscopy (ESS) in Detection of Skin Cancer by Fitzpatrick Skin Type: Sub-analysis of DERM-SUCCESS, a Clinical Validation Study Conducted in the Primary Care Setting. Poster Presentation, Skin of Color Society Meeting, New York, NY, Oct 12-15, 2023.

Merry SP, McCormick B, Nguyen VL, Chatha K, Croghan I, Leffell D. DERM-SUCCESS: Clinical Validation of an Elastic Scattering Spectroscopy (ESS) Device in Assisting Primary Care Physicians' Detection of Skin Cancer. Poster Presentation, Maui Derm NPPA Conference, Asheville, NC, Sept 23-25, 2023.

Hartman R, Tepedino K, Fung MA, McNiff J, Nguyen VL, Chatha K, Grant-Kels J. Melanoma Detection in the Medicare Population: Sub-analysis of DERM-ASSESS III, a Validation Study of a Handheld Elastic Scattering Spectroscopy Device on Lesions Suggestive of Melanoma. Poster Presentation, American Dermoscopy Meeting, Vermont, July 13-16, 2023.

Leffell D, Croghan I, Rabinovitz H, Hucks C, Chatha K, Nguyen VL, Merry SP. Clinical Performance of Elastic Scattering Spectroscopy (ESS) in Detection of Skin Cancer by Fitzpatrick Skin Type: Sub-analysis of DERM-SUCCESS, a Clinical Validation Study Conducted in the Primary Care Setting. Poster Presentation, American Dermoscopy Meeting, Vermont, Jul 13-16, 2023.

Salmon P, Brown A, Mortimer N, Fernandez S, Nguyen VL, Siene AJ. Use of Elastic-Scattering Spectroscopy and Machine Learning when Assessing Skin Lesions Suggestive of Skin Cancer [Interim Analysis]. Poster Presentation, 25th World Congress of Dermatology, Singapore, July 3-8, 2023.

Chatha K, Christman H, Thames T, Geisse J, Rabinovitz H, Leffell D, Grant-Kels J. The Effectiveness of a Handheld Elastic Scattering Spectroscopy (ESS) Device in Detecting Melanoma and Non-Melanoma Skin Cancers. Poster Presentation, American Academy of Dermatology Annual Meeting, New Orleans, LA, March 17-21, 2023.

Seiverling EV, Agresta T, Cyr P, Caines L, Nguyen VL, Chatha K, Siegel DM. Clinical Utility of an Elastic Scattering Spectroscopy Device in Assisting Primary Care Physician's Detection of Skin Cancers. Poster Presentation, Maui Derm Hawaii Conference, Wailea, HI, January 23-27, 2023.

Merry SP, Chatha K, Croghan I, Nguyen VL, McCormick B, Leffell D. Clinical Performance of Novel Elastic Scattering Spectroscopy (ESS) in Detection of Skin Cancer: A Blinded, Prospective.

Multi-Center Clinical Trial. Poster Presentation, Maui Derm Hawaii Conference, Wailea, HI, January 23-27, 2023.

Hartman R, Tepedino K, Fung, MA, McNiff, JM, Patrick G, Nguyen V, Chatha K, Grant-Kels J. Validation of a Handheld Elastic-scattering Spectroscopy Device on Lesions Suggestive of Melanoma. Poster Presentation, SDPA Fall Conference, Miami, FL, November 17-20, 2022.

Merry SP, Croghan I, McCormick B, Chatha K, Leffell D. Clinical Performance of Novel Elastic Scattering Spectroscopy (ESS) in Detection of Skin Cancer: A Blinded, Prospective, Multi-Center Clinical Trial [Initial Results]. Poster Presentation, Innovations in Dermatology Conference, Las Vegas, NV, November 3-5, 2022.

Salmon P and Bonning M. Use of Elastic-Scattering Spectroscopy and Machine Learning when Assessing Skin Lesions Suggestive of Skin Cancer. Poster Presentation, SDPA Fall Conference, Los Angeles, CA, November 4-7, 2021.

Podium Presentation Citations

Merry S, McCormick B, EV, Croghan I, Slatko G, Chatha K, Leffell D. A Novel Elastic Scattering Spectroscopy Device Accurately Identifies Skin Lesions as High Risk for Cancer Among Those Deemed Equivocal by Primary Care Physicians. Podium Presentation, STFM Annual Meeting, Los Angeles CA, May 4-8, 2024.

Patrick G, Leffell D, Merry SP, Croghan I, Rabinovitz H, Cognetta A. Clinical Capabilities of a Handheld Elastic Scattering Spectroscopy-Artificial Intelligence Device as an Adjunctive Tool for Evaluating Skin Cancer in Skin of Color. Podium Presentation, American Academy of Dermatologist's Annual Meeting, Tampa Bay, FL, Aug 10-13th 2023.

Seiverling EV, Agresta T, Caines L, Cyr P, Salmon P, Nguyen VL, Chatha K, Siegel D. Clinical Utility of an Elastic Scattering Spectroscopy Device in Assisting Primary Care Physician's Detection of Skin Cancers. Podium Presentation, 25th World Congress of Dermatology, Singapore, July 3-8, 2023.

Merry SP, Croghan I, McCormick B, Cyr P, Seiverling EV, Caines L, Nguyen VL, Chatha K, Agresta T. Clinical Validation and Utility of a Novel Elastic Scattering Spectroscopy (ESS) Device in Assisting Primary Care Physician's Detection of Skin Cancers. Podium Presentation, STFM Annual Spring Conference, Tampa, FL, April 29-May 3, 2023.