VivoSight OCT Publications List – updated 10.2025

NON-MELANOMA SKIN CANCER & ACTINIC KERATOSIS

NSMC DIAGNOSIS

Jerjes, Waseem, et al. "In Vivo Optical Coherence Tomography for the Detection, Subtyping, and Margin Assessment of Facial Basal Cell Carcinoma: A Comparative Study with Histopathology." Journal of Clinical Medicine 14.3 (2025): 949.

Boostani M, Pellacani G, Wortsman X, Suppa M, Goldust M, Cantisani C, Pietkiewicz P, Lőrincz K, Bánvölgyi A, Wikonkál NM, Huss WJ. FDA and EMA-approved noninvasive imaging techniques for basal cell carcinoma subtyping: A systematic review. JAAD International. 2025 Jun 10.

Mozaffari M, Fünfer K, Bader S, Thölken KF, Yilmaz P, Welzel J, Schuh S. Drei auf einen Streich–Ein Plattenepithelkarzinom auf einem Lupus pernio und einer Erfrierung in nur einer Gesichtshälfte–ein Fallbericht. Aktuelle Dermatologie. 2025 Feb;51(01/02):40-5.

McMullan P, Balboul S, Gasek N, Skudalski L, Zhou AE, Jain NP, Gulati N, Ciardo S, Farnetani F, Sloan B, Ungar J. Minimally invasive modalities for keratinocyte carcinomas Part I: Diagnostics. Journal of the American Academy of Dermatology. 2025 Feb 22.

Widaatalla, Y., Wolswijk, T., Khan, M.D., Halilaj, I., Mosterd, K., Woodruff, H.C. and Lambin, P., 2025. Radiomics in Dermatological Optical Coherence Tomography (OCT): Feature Repeatability, Reproducibility, and Integration into Diagnostic Models in a Prospective Study. Cancers, 17(5), p.768.

Deußing M, French LE, Sattler EC, Hartmann D. Nicht invasive bildgebende Diagnostik in der Dermatoonkologie: Aktuelle Methoden und ihre Einsatzmöglichkeiten. hautnah dermatologie. 2024 Mar;40(2):26-31.

Mozaffari M, Fünfer K, Bader S, Thölken KF, Yilmaz P, Welzel J, Schuh S. Drei auf einen Streich–Ein Plattenepithelkarzinom auf einem Lupus pernio und einer Erfrierung in nur einer Gesichtshälfte–ein Fallbericht. Aktuelle Dermatologie. 2024 Jun 26.

Winkler D, Desch A, Mireles MP, Welzel J, Schuh S. Line-field confocal optical coherence tomography and optical coherence tomography for distinguishing basal cell carcinoma from dermal nevus: A case report. JEADV Clinical Practice. 2024.

Garcia CN, Wies C, Hauser K, Brinker T. NON-INVASIVE TECHNOLOGIES FOR THE DIAGNOSIS OF SQUAMOUS CELL CARCINOMA A SYSTEMATIC REVIEW AND META-ANALYSIS. JID Innovations. 2024 Jul 20:100303.

Line-field confocal optical coherence tomography and optical coherence tomography for distinguishing basal cell carcinoma from dermal nevus: A case report

Kandolf L, Peris K, Malvehy J, Mosterd K, Heppt MV, Fargnoli MC, Berking C, Arenberger P, Bylaite-Bučinskiene M, Del Marmol V, Dirschka T. European consensus-based interdisciplinary guideline for diagnosis, treatment and prevention of actinic keratoses, epithelial UV-induced dysplasia and field cancerization on behalf of European Association of Dermato-Oncology, European Dermatology Forum, European Academy of Dermatology and Venereology and Union of Medical Specialists (Union Européenne des Médecins Spécialistes). Journal of the European Academy of Dermatology and Venereology. 2024 Mar 7.

Leiter U, Heppt MV, Steeb T, Alter M, Amaral T, Bauer A, Bechara FG, Becker JC, Breitbart EW, Breuninger H, Diepgen T. German S3 guideline “actinic keratosis and cutaneous squamous cell carcinoma”–Long version of the update 2023. EJC Skin Cancer. 2023 Jan 1;1:100004.

Ganier, C., Mazin, P., Herrera-Oropeza, G., Du-Harpur, X., Blakeley, M., Gabriel, J., Predeus, A.V., Cakir, B., Prete, M., Harun, N. and Darrigrand, J.F., 2024. Multiscale spatial mapping of cell populations across anatomical sites in healthy human skin and basal cell carcinoma. Proceedings of the National Academy of Sciences, 121(2), p.e2313326120.

Rokohl AC, Siebelmann S, Heindl LM. Optical Coherence Tomography in Conjunctival and Eyelid Lesions. InOptical Coherence Tomography of the Anterior Segment 2023 Jan 3 (pp. 51-59). Cham: Springer International Publishing.

Hobelsberger S, Gellrich FF, Laske J, Meier F, Beissert S, Steininger J. Immediate diagnosis of cutaneous metastases with optical coherence tomography, line-field confocal optical coherence tomography and dermoscopy: A case series. JEADV Clinical Practice. 2023.

Hobelsberger S, Steininger J, Laske J, Berndt K, Meier F, Beissert S, et al. Comparison of optical coherence tomography and in vivo reflectance confocal microscopy with dermoscopy for the diagnosis and management of nonmelanoma skin cancer: a randomized controlled trial. JEADV Clin Pract. 2023;1–14.

Wolswijk T, Nelemans PJ, Adan F, Abdul Hamid M, Mosterd K. Pitfalls for differentiating basal cell carcinoma from non-basal cell carcinoma on optical coherence tomography: A clinical series. The Journal of Dermatology. 2023 Nov 6.

Sortino AM, Abdalla CM, Abdalla BM, Piñeiro-Maceira JM, Fraga Braghiroli NA, Braga JC, de Sá BC, Blumetti TC, Gomes EE, Mitsunaga AC, Rocha LK. Ancillary Tools for Dermatological Skin Assessment: Dermoscopy, Reflectance Confocal Microscopy and Optical Coherence Tomography. InOncodermatology: An Evidence-Based, Multidisciplinary Approach to Best Practices 2023 Jul 19 (pp. 69-151). Cham: Springer International Publishing.

Burnette C, Sivesind TE, Dellavalle R. From the Cochrane Library: Optical Coherence Tomography for Diagnosing Skin Cancer in Adults. JMIR Dermatology. 2023 Mar 13;6(1):e41355.

Wolswijk T, Nelemans PJ, Adan F, Mosterd K. Accuracy of Optical Coherence Tomography for Subtyping Basal Cell Carcinoma: Using Histopathology of Biopsy and Entire Lesion as Reference Standard. Acta Dermato-Venereologica. 2023 Mar 14;103:adv00889-.

Ahmady S, Wolswijk T, Nelemans PJ, Adan F, Vernemmen AI, Winnepenninckx V, Kelleners-Smeets NW, Mosterd K. Measuring tumor depth of Bowen's disease by optical coherence tomography. Skin Research and Technology. 2023 Feb;29(2):e13282.

Ho G, Schwartz RJ, Melhoranse-Gouveia B, Guitera P, O'Sullivan NA, Cheung VK, Ch'ng S, Martin LK. Utility of optical coherence tomography in basal cell naevus syndrome: A case report. Australasian Journal of Dermatology. 2022 Nov;63(4):e331-5.

Wolswijk T, Adan F, Nelemans PJ, Mosterd K. A cohort study on detection and subtyping of basal cell carcinoma with optical coherence tomography: The additional value of distant diagnosis by an expert. Journal of the American Academy of Dermatology. 2022 Oct 11.

Adan F, Nelemans PJ, Essers BA, Brinkhuizen T, Dodemont SR, Kessels JP, Quaedvlieg PJ, Dermont GJ, Winnepenninckx VJ, Hamid MA, Kelleners-Smeets NW. Optical coherence tomography versus punch biopsy for diagnosis of basal cell carcinoma: a multicentre, randomised, non-inferiority trial. The Lancet Oncology. 2022 Aug 1;23(8):1087-96.

Lentsch G, Baugh EG, Lee B, Aszterbaum M, Zachary CB, Kelly KM, Balu M. Research Techniques Made Simple: Emerging Imaging Technologies for Noninvasive Optical Biopsy of Human Skin. Journal of Investigative Dermatology. 2022 May 1;142(5):1243-52.

Loo E, Sinx K, Welzel J, Schuh S, Kelleners-Smeets N, Mosterd K, Nelemans P. Cumulative sum analysis for the learning curve of optical coherence tomography assisted diagnosis of basal cell carcinoma.

Adan F, Mosterd K, Wolswijk T, Kelleners-Smeets NW, Essers BA. Patient Preference for Optical Coherence Tomography versus Punch Biopsy for Diagnosis of Basal Cell Carcinoma: A Labelled Discrete Choice Experiment. Acta Dermato-Venereologica. 2021 Dec 14.

Fuchs CS, Ortner VK, Mogensen M, Rossi AM, Pellacani G, Welzel J, Mosterd K, Guitera P, Nayahangan LJ, Johnsson VL, Haedersdal M. 2021 international consensus statement on optical coherence tomography for basal cell carcinoma: image characteristics, terminology and educational needs. Journal of the European Academy of Dermatology and Venereology. 2022 Jun;36(6):772-8.

Adan F, Mosterd K, Kelleners-Smeets NW, Nelemans PJ. Diagnostic Value of Optical Coherence Tomography Image Features for Diagnosis of Basal Cell Carcinoma. Acta dermato-venereologica. 2021 Nov 1.

Adan F, Oyen EM, Holtackers RJ, van Loo E, Dermont GJ, Kelleners-Smeets NW, Nelemans PJ, Mosterd K. Topical Application of Glycerol Increases Penetration Depth of Optical Coherence Tomography in Diagnosis of Basal Cell Carcinoma. Acta dermato-venereologica. 2021 Jun 22;101(6):adv00474-.

Adan F, Nelemans PJ, Kelleners-Smeets NW, Kessels JP, Brinkhuizen T, Mosterd K. The additional diagnostic value of optical coherence tomography in clinically diagnosed basal cell carcinomas undergoing direct surgical excision. British Journal of Dermatology. 2021 Jun 14.

Fredman G, Qiu Y, Ardigò M, Mogensen M. Skin tags imaged by reflectance confocal microscopy, optical coherence tomography and multispectral optoacoustic tomography at the bedside. Skin Research and Technology. 2021 May;27(3):324-31.

Møller Israelsen N, Mogensen M, Jensen M, Haedersdal M, Bang O. Delineating papillary dermis around basal cell carcinomas by high and ultrahigh resolution optical coherence tomography–a pilot study. Journal of Biophotonics.:e202100083.

Rajabi-Estarabadi A, Garbarino F, Williams NM, Nami N, Nouri K. Extramammary Paget Disease: In Vivo Dynamic Optical Coherence Tomography Imaging. Journal of the European Academy of Dermatology and Venereology.

Sinx KA, Tonk EH, Kelleners-Smeets NW, Winnepenninckx VJ, Nelemans PJ, Mosterd K. Optical Coherence Tomography for non-invasive diagnosis and subtyping of Basal Cell Carcinoma, a prospective cohort study. Journal of Investigative Dermatology. 2020 Mar 6.

Garbarino F, Migliorati S, Farnetani F, De Pace B, Ciardo S, Manfredini M, Reggiani Bonetti L, Kaleci S, Chester J, Pellacani G. Nodular skin lesions: correlation of reflectance confocal microscopy and optical coherence tomography features. Journal of the European Academy of Dermatology and Venereology. 2020 Jan;34(1):101-11.

Peris K, Fargnoli MC, Garbe C, Kaufmann R, Bastholt L, Seguin NB, Bataille V, Del Marmol V, Dummer R, Harwood CA, Hauschild A. Diagnosis and treatment of basal cell carcinoma: European consensus–based interdisciplinary guidelines. European Journal of cancer. 2019 Sep 1;118:10-34.

Marghoob N, Psomadakis CE, Markowitz O. Noninvasive imaging to improve diagnostic accuracy: A case report. JAAD Case Reports. 2019 Jun 1;5(6):508-10.

Jerjes W, Hamdoon Z, Hopper C. Structural validation of facial skin using optical coherence tomography: A descriptive study. Skin Research and Technology. 2019 Sep 23.

Jerjes W, Hamdoon Z, Al Rawi N, Hopper C. OCT in the diagnosis of head and neck pre-cancerous and cancerous cutaneous lesions: An immediate ex vivo study. Photodiagnosis and photodynamic therapy. 2019 Jul 27.

Lang BM, Balermpas P, Bauer A, Blum A, Brölsch GF, Dirschka T, Follmann M, Frank J, Frerich B, Fritz K, Hauschild A. S2k guidelines for cutaneous basal cell carcinoma–part 1: epidemiology, genetics and diagnosis. JDDG: Journal der Deutschen Dermatologischen Gesellschaft. 2019 Jan;17(1):94-103.

Verne SH, Magno RJ, Eber AE, Cervantes J, Perper M, Nouri K. Optical coherence tomography image processing for in vivo 3-dimensional visualization of basal cell carcinoma. Skin Research and Technology. 2018 Aug;24(3):509-11.

Tes D, Aber A, Zafar M, Horton L, Fotouhi A, Xu Q, Moiin A, Thompson AD, Moraes Pinto Blumetti TC, Daveluy S, Chen W. Granular Cell Tumor Imaging Using Optical Coherence Tomography. Biomedical engineering and computational biology. 2018 Jan;9:1179597218790250.

di Ruffano LF, Dinnes J, Deeks JJ, Chuchu N, Bayliss SE, Davenport C, Takwoingi Y, Godfrey K, O'Sullivan C, Matin RN, Tehrani H. Optical coherence tomography for diagnosing skin cancer in adults. Cochrane Database of Systematic Reviews. 2018(12).

Reddy N, Nguyen BT. The utility of optical coherence tomography for diagnosis of basal cell carcinoma: a quantitative review. British Journal of Dermatology. 2019 Mar;180(3):475-83.

Xu Q, Adabi S, Clayton A, Daveluy S, Mehregan D, Nasiriavanaki M. Swept-Source Optical Coherence Tomography–Supervised Biopsy. Dermatologic Surgery. 2018 Jun 1;44(6):768-75.

Batz S, Wahrlich C, Alawi A, Ulrich M, Lademann J. Differentiation of Different Nonmelanoma Skin Cancer Types Using OCT. Skin pharmacology and physiology. 2018;31(6):238-45.

Xiong YQ, Mo Y, Wen YQ, Cheng MJ, Huo ST, Chen XJ, Chen Q. Optical coherence tomography for the diagnosis of malignant skin tumors: a meta-analysis. Journal of Biomedical Optics. 2018 Feb;23(2):020902.

Levine A, Siegel DM, Markowitz O. Update on Noninvasive Diagnostic Imaging and Management of Nonmelanoma Skin Cancer. Current Dermatology Reports. 2018:1-5.

Themstrup L, De Carvalho N, Nielsen SM, Olsen J, Ciardo S, Schuh S, Nørnberg BM, Welzel J, Ulrich M, Pellacani G, Jemec GB. In vivo differentiation of common basal cell carcinoma subtypes by microvascular and structural imaging using dynamic optical coherence tomography. Experimental dermatology. 2017 Dec 7.

Holmes J, von Braunmühl T, Berking C, Sattler E, Ulrich M, Reinhold U, Kurzen H, Dirschka T, Kellner C, Schuh S, Welzel J. Optical coherence tomography of basal cell carcinoma: influence of location, subtype, observer variability and image quality on diagnostic performance. British Journal of Dermatology. 2017 Nov 28.

Welzel J, Schuh S. Noninvasive diagnosis in dermatology. JDDG: Journal der Deutschen Dermatologischen Gesellschaft. 2017 Oct 1;15(10):999-1016.

Rigel DS, Farberg AS. Non-Invasive Technologies for the Diagnosis and Management of Skin Cancer, E-Book. Elsevier Health Sciences; 2017 Sep 16.

Sigsgaard V, Themstrup L, Theut Riis P, Olsen J, Jemec GB. In vivo measurements of blood vessels' distribution in non-melanoma skin cancer by dynamic optical coherence tomography—a new quantitative measure?. Skin Research and Technology. 2017 Aug 3.

Levine A, Wang K, Markowitz O. Optical Coherence Tomography in the Diagnosis of Skin Cancer. Dermatologic Clinics. 2017 Aug 9.

Themstrup, L., Pellacani, G., Welzel, J., Holmes, J., Jemec, G.B.E. and Ulrich, M., 2017. In vivo microvascular imaging of cutaneous actinic keratosis, Bowen's disease and squamous cell carcinoma using Dynamic optical coherence tomography. Journal of the European Academy of Dermatology and Venereology.

Maher, N.G., Blumetti, T.P., Gomes, E.E., Cheng, H.M., Satgunaseelan, L., Lo, S., Rezze, G.G., Scolyer, R.A. and Guitera, P., 2016. Melanoma diagnosis may be a pitfall for optical coherence tomography assessment of equivocal amelanotic or hypomelanotic skin lesions. British Journal of Dermatology.

Olsen J, Themstrup L, De Carvalho N, Mogensen M, Pellacani G, Jemec GB. Diagnostic accuracy of optical coherence tomography in actinic keratosis and basal cell carcinoma. Photodiagnosis and photodynamic therapy. 2016 Dec 31;16:44-9.

Hussain AA, Themstrup L, Nürnberg BM, Jemec GB. Adjunct use of optical coherence tomography increases the detection of recurrent basal cell carcinoma over clinical and dermoscopic examination alone. Photodiagnosis and photodynamic therapy. 2016 Jun 30;14:178-84.

Meekings A, Utz S, Ulrich M, Bienenfeld A, Nandanan N, Fisher J, McKenzie G, Siegel DM, Feldman E, Markowitz O. Differentiation of Basal Cell Carcinoma Subtypes in Multi-Beam Swept Source Optical Coherence Tomography (MSS-OCT). Journal of drugs in dermatology: JDD. 2016 May 1;15(5):545.

Cheng HM, Lo S, Scolyer R, Meekings A, Carlos G, Guitera P. Accuracy of optical coherence tomography for the diagnosis of superficial basal cell carcinoma–a prospective, consecutive, cohort study of 168 cases. British Journal of Dermatology. 2016 May 1.

Markowitz O, Schwartz M, Minhas S, Siegel DM. Speckle-variance optical coherence tomography: a novel approach to skin cancer characterization using vascular patterns. Dermatology Online Journal. 2016 Jan 1;22(4).

Schuh S, Kaestle R, Sattler EC, Welzel J. Optical coherence tomography of actinic keratoses and basal cell carcinomas–differentiation by quantification of signal intensity and layer thickness. Journal of the European Academy of Dermatology and Venereology. 2016 Feb 1.

Schuh S, Kaestle R, Sattler E, Welzel J. Comparison of different optical coherence tomography devices for diagnosis of non-melanoma skin cancer. Skin Research and Technology. 2016 Jan 1.

Die Neue Dimension der Haut

Markowitz, Orit, Michelle Schwartz, Eleanor Feldman, Amanda Bienenfeld, Amy K. Bieber, Jeffery Ellis, Usha Alapati, Mark Lebwohl, and Daniel M. Siegel. "Evaluation of optical coherence tomography as a means of identifying earlier stage basal cell carcinomas while reducing the use of diagnostic biopsy." The Journal of clinical and aesthetic dermatology 8, no. 10 (2015): 14.

OCT in der dermatologischen Praxis - Morphologische Tumormerkmale hoch aufgelöst, Optical Coherence Tomography dissolved in dermatological practice, Morphological tumor features highly resolved

Cheng, H. M., and P. Guitera. "Systematic review of optical coherence tomography usage in the diagnosis and management of basal cell carcinoma." British Journal of Dermatology 173, no. 6 (2015): 1371-1380.

Pelosini, L., H. B. Smith, J. B. Schofield, A. Meeckings, A. Dithal, and M. Khandwala. "A novel imaging approach to periocular basal cell carcinoma: in vivo optical coherence tomography and histological correlates." Eye (2015).
Wahrlich, C., S. A. Alawi, S. Batz, J. W. Fluhr, J. Lademann, and M. Ulrich. "Assessment of a scoring system for Basal Cell Carcinoma with multi-beam optical coherence tomography." Journal of the European Academy of Dermatology and Venereology 29, no. 8 (2015): 1562-1569.

Ulrich, M., T. Braunmuehl, H. Kurzen, T. Dirschka, C. Kellner, E. Sattler, C. Berking, J. Welzel, and U. Reinhold. "The sensitivity and specificity of optical coherence tomography for the assisted diagnosis of nonpigmented basal cell carcinoma: an observational study." British Journal of Dermatology 173, no. 2 (2015): 428-435.

Reinholz, M., et al. "Non-invasive diagnosis of sweat gland dysplasia using optical coherence tomography and reflectance confocal microscopy in a family with anhidrotic ectodermal dysplasia (Christ–Siemens–Touraine syndrome)." Journal of the European Academy of Dermatology and Venereology (2015).

Alawi, S. A., S. Batz, J. Röwert-Huber, J. W. Fluhr, J. Lademann, and M. Ulrich. "Correlation of optical coherence tomography and histology in microcystic adnexal carcinoma: a case report." Skin Research and Technology 21, no. 1 (2015): 15-17.

Modern diagnostic methods in dermatooncology

Hussain, Alia Arif, Lotte Themstrup, and Gregor Borut Ernst Jemec. "Optical coherence tomography in the diagnosis of basal cell carcinoma." Archives of dermatological research 307, no. 1 (2015): 1-10.

Schmitz, Lutz, Uwe Reinhold, Erhard Bierhoff, and Thomas Dirschka. "Optical coherence tomography: its role in daily dermatological practice."JDDG: Journal der Deutschen Dermatologischen Gesellschaft 11, no. 6 (2013): 499-507.

Coleman, Andrew John, Thomas James Richardson, Guy Orchard, Ayesha Uddin, Min Joo Choi, and Katie Elizabeth Lacy. "Histological correlates of optical coherence tomography in non-melanoma skin cancer." Skin Research and Technology 19, no. 1 (2013): e10-e19.

Banzhaf, Christina, and Gregor BE Jemec. "Imaging granulomatous lesions with optical coherence tomography." Case reports in dermatology 4, no. 1 (2012): 14-18.

Smith, Louise E., Vanessa Hearnden, Zenghai Lu, Rod Smallwood, Keith D. Hunter, Stephen J. Matcher, Martin H. Thornhill, Craig Murdoch, and Sheila MacNeil. "Evaluating the use of optical coherence tomography for the detection of epithelial cancers inĀ vitro." Journal of biomedical optics 16, no. 11 (2011): 116015-1160158.

NSMC TREATMENT MONITORING

von Knorring T, Mogensen M, Banzhaf CA, Jemec G, Themstrup L. Optical Coherence Tomography and Cryosurgery. InCryosurgery: A Practical Manual 2025 Aug 14 (pp. 125-131). Cham: Springer Nature Switzerland.

van Loo E. The knife cuts one way: Non-invasive diagnosis and surgical treatment of basal cell carcinoma. (PhD Thesis)

Wiegell SR, Hendel K, Fuchs CS, Julie GE, Vissing M, TROELSEN JT, JEMEC GB, HAEDERSDAL M. An Explorative Study on Calcium Electroporation for Low-risk Basal Cell Carcinoma. Acta dermato-venereologica. 2024;104.

Cantisani, C., Musolff, N., Longo, C., Di Guardo, A., Rovaldi, E., Rossi, G., Sasso, F., Farnetani, F., Rega, F., Bánvölgyiv, A. and Azzella, G., 2024. Dynamic optical coherence tomography evaluation in locally advanced basal cell carcinoma during sonidegib treatment. Journal of the European Academy of Dermatology and Venereology.

Zachary CB, Elsanadi R, Maghfour J, Kohli I, Kelly KM, Soni R, Fortier C, Holmes J, Heckt H, Makowski A, Negus D. Controlled hyperthermia and monitored protocol for basal cell carcinoma: interim report. InPhotonics in Dermatology and Plastic Surgery 2023 2023 Mar 14 (Vol. 12352, pp. 26-28). SPIE.

Absil G, Lebas E, Nikkels AF. Efficacy assessment of oxygen flow assisted administration of topical methotrexate (OFA-MTX5%) for superficial basal cell carcinoma assessed by optical coherence tomography. JEADV Clinical Practice. 2023 Mar;2(1):101-6.

Palacio A, Medrano K, Holmes J, Bierhoff E, Reinhold U. D-OCT-assisted and histology-controlled evaluation of 1064 nm Nd: YAG laser therapy of basal cell carcinomas. JEADV Clinical Practice. 2022.

Palacio Giral A. Optical coherence tomography-assisted 1064nm Nd: YAG laser therapy of superficial and nodular basal cell carcinomas with≤ 1mm tumor thickness (Doctoral dissertation, Universitäts-und Landesbibliothek Bonn).

Wolswijk T, Adan F, Nelemans PJ, Defauwes A, Mosterd K. Optical coherence tomography for diagnosing recurrent or residual basal cell carcinoma after topical treatment: a diagnostic cohort study. Journal of the American Academy of Dermatology. 2023 Jun 28.

Fredman G, Wenande E, Hendel K, Togsverd-Bo K, Haedersdal M. Efficacy and safety of laser-assisted combination chemotherapy: a follow-up study of treatment with 5-fluorouracil and cisplatin for basal cell carcinoma. Lasers in Surgery and Medicine. 2022 Jan;54(1):113-20.

Kranz S, Brunnmeier G, Yilmaz P, Thamm J, Schiele S, Müller G, Key C, Welzel J, Schuh S. Optical coherence tomography-guided Nd: YAG laser treatment and follow-up of basal cell carcinoma. Lasers in Surgery and Medicine. 2023 Feb 5.

Markowitz O, Bressler MY. Combining Nd: YAG laser with optical coherence tomography for nonsurgical treatment of basal cell carcinoma. Lasers in Surgery and Medicine. 2022 Jan;54(1):105-12.

Mehrabi JN, Kelly KM, Holmes JD, Zachary CB. Assessing the Outcomes of Focused Heating of the Skin by a Long-Pulsed 1064 nm Laser with an Integrated Scanner, Infrared Thermal Guidance, and Optical Coherence Tomography. Lasers in Surgery and Medicine.

Wenande E, Hendel K, Mogensen M, Bagger C, Mårtensson NL, Persson DP, Lerche CM, Husted S, Janfelt C, Togsverd-Bo K, Anderson RR. Efficacy and Safety of Laser-Assisted Combination Chemotherapy: An Explorative Imaging-Guided Treatment With 5-Fluorouracil and Cisplatin for Basal Cell Carcinoma. Lasers in Surgery and Medicine. 2020 Sep 22.

Stephens R, Holmes J, Eadie E. Lesion compression during light activation may improve efficacy of Photodynamic Treatment (PDT) of Basal Cell Carcinoma (BCC): Preliminary results and rationale. Journal of the European Academy of Dermatology and Venereology. 2020 Apr 20.

Banzhaf CA, Phothong W, Suku ML, Ulrich M, Philipsen PA, Mogensen M, Haedersdal M. Basal cell carcinoma treated with combined ablative fractional laser and ingenol mebutate–an exploratory study monitored by optical coherence tomography and reflectance confocal microscopy. Journal of the European Academy of Dermatology and Venereology. 2020 Mar;34(3):502-9.

Markowitz, Orit, Tongdee, Emily, and Levina, Amanda, Optimal Cosmetic Outcomes for BCC: A Retrospective Study of Nonablative Laser Management, Cutis, May;103(05):292-297, E1-E3

Ahluwalia J, Avram MM, Ortiz AE. Outcomes of long-pulsed 1064 nm Nd: YAG laser treatment of basal cell carcinoma: A retrospective review. Lasers in Surgery and Medicine. 2018.

Markowitz O, Wang K, Levine A, Schwartz M, Minhas S, Feldman E, Siegel DM. Noninvasive Long-term Monitoring of Actinic Keratosis and Field Cancerization Following Treatment with Ingenol Mebutate Gel 0.015%. J Clin Aesthet Dermatol. 2017;10(10):28-33.

Niculescu, L., Bierhoff, E., Hartmann, D., Ruzicka, T., Berking, C. and von Braunmühl, T., 2017. Optical coherence tomography imaging of basal cell carcinoma undergoing photodynamic therapy: A pilot study. Photodiagnosis and Photodynamic Therapy, 18, pp.133-137.

MARKOWITZ, O. and SCHWARTZ, M., 2016. The Use of Noninvasive Optical Coherence Tomography to Monitor the Treatment Progress of Vismodegib and Imiquimod 5% Cream in a Transplant Patient with Advanced Basal Cell Carcinoma of the Nose. Journal of Clinical & Aesthetic Dermatology, 9(8).

Levine A, Wang K, Marokowitz O, "Optical Coherence Tomography for Skin Cancer Screening." Gavin J Drmatol Res Ther (2016): 24-25

Braunmühl, T., D. Hartmann, J. K. Tietze, D. Cekovic, C. Kunte, T. Ruzicka, C. Berking, and E. C. Sattler. "Morphologic features of basal cell carcinoma using the en-face mode in frequency domain optical coherence tomography."Journal of the European Academy of Dermatology and Venereology (2016).

Yücel D, Themstrup L, Manfredi M, Jemec GB. Optical coherence tomography of basal cell carcinoma: density and signal attenuation. Skin Research and Technology. 2016 Jun 1.

Schwartz M, Siegel DM, Markowitz O. Commentary on the Diagnostic Utility of Non-invasive Imaging Devices for Field Cancerization. Experimental dermatology. 2016 Jun 1.

Markowitz O, Utz S. Differentiating Early Stage Cystic Keratoacanthoma, Nodular Basal Cell Carcinoma, and Excoriated Acne Vulgaris by Clinical Exam, Dermoscopy, and Optical Coherence Tomography: A Report of 3 Cases. The Journal of clinical and aesthetic dermatology. 2015 Apr;8(4):48.

Themstrup, L., Banzhaf, C.A., Mogensen, M. and Jemec, G.B.E., 2014. Optical coherence tomography imaging of non-melanoma skin cancer undergoing photodynamic therapy reveals subclinical residual lesions. Photodiagnosis and photodynamic therapy, 11(1), pp.7-12.

Schmitz, L., Bierhoff, E. and Dirschka, T., 2013. Optical coherence tomography imaging of Erythroplasia of Queyrat and treatment with imiquimod 5% cream: A case report. Dermatology, 228(1), pp.24-26.

NMSC MARGIN MAPPING

Fogarty GB, Paton EJ, Grace J, Prossor J, Fox A, Sinz C. Initial Experience in Using Optical Coherence Tomography in Defining Radiation Fields for Head and Neck Basal Cell Carcinoma. Diseases & Research. 2025 Jul 14.

Santillan, Monica Rosales, Indermeet Kohli, and David Ozog. "Optical Coherence Tomography for Mohs Margin Assessment of Basal Cell Carcinoma." Dermatologic Surgery 51.3 (2025): 319-321.

Fünfer K, Mozaffari M, Mayer O, Schlingmann S, Welzel J, Schuh S. One-stop shop: diagnosis and treatment of basal cell carcinoma in one step. Journal of Clinical Medicine. 2024 Jun 29;13(13):3830.

Michelini, S., Mandel, V.D., Ardigò, M., Ciardo, S., Cota, C., Cesinaro, A.M., Rossi, E., Ferrari, B., Kaleci, S., Di Fraia, M. and Chello, C., 2024. Combining Reflectance Confocal Microscopy, Optical Coherence Tomography, and Ex-Vivo Fluorescence Confocal Microscopy for Margin Assessment in Basal Cell Carcinoma Excision. Dermatology Practical & Conceptual, pp.e2024090-e2024090.

Akella SS, Lee J, May JR, Puyana C, Kravets S, Dimitropolous V, Tsoukas M, Manwar R, Avanaki K. Using optical coherence tomography to optimize Mohs micrographic surgery. Scientific Reports. 2024 Apr 17;14(1):8900.

Holm KB, Nielsen LJ, Lock-Andersen J, Behrendt N, Svensson MS, Themstrup L, Jemec GB. Optical coherence tomography for presurgical delineation of basal cell carcinomas on the face–a comparison with histopathology. Journal of Cutaneous Pathology. 2023 Feb 16.

Adan, F., Kallen, E.J.J., Dermont, G., Muche, J.M., Sinx, K.A.E., Schilder, A., Abdul Hamid, M., Nelemans, P.J. and Mosterd, K., 2022. Diagnostic accuracy of optical coherence tomography in the assessment of in vivo primary basal cell carcinoma resection margins prior to Mohs Micrographic Surgery. Journal of the European Academy of Dermatology and Venereology, 36(4), pp.e270-e272.

Hamdoon Z, Jerjes W, Rashed D, Kawas S, abdul Sattar A, Samsudin R, Hopper C. In vivo optical coherence tomography-guided photodynamic therapy for skin pre-cancer and cancer. Photodiagnosis and photodynamic therapy. 2021 Dec 1;36:102520.

Parashar K, Torres AE, Boothby-Shoemaker W, Kohli I, Veenstra J, Neel V, Ozog DM. Imaging Technologies for Pre-surgical Margin Assessment of Basal Cell Carcinoma. Journal of the American Academy of Dermatology. 2021 Nov 16.

Møller Israelsen N, Mogensen M, Jensen M, Haedersdal M, Bang O. Delineating papillary dermis around basal cell carcinomas by high and ultrahigh resolution optical coherence tomography—A pilot study. Journal of Biophotonics. 2021 Nov;14(11):e202100083.

Jerjes W, Hamdoon Z, Al-Rawi N, Hopper C. Optical coherence tomography in the assessment of cutaneous cancer margins of the face: an immediate ex vivo study. Photodiagnosis and Photodynamic Therapy. 2019 Dec 4:101616.

Fisher J, Siegel DM, Markowitz O. Clinical Utility of Bedside Multibeam Optical Coherence Tomography Imaging in a Patient With Multiple Basal Cell Carcinomas. Dermatologic Surgery. 2018 Jun 1;44(6):874-6

Levine A, Siegel D, Markowitz O. Imaging in cutaneous surgery. Future Oncology. 2017 Nov;13(26):2329-40.

De Carvalho N, Schuh S, Kindermann N, Kästle R, Holmes J, Welzel J. Optical coherence tomography for margin definition of basal cell carcinoma before micrographic surgery—recommendations regarding the marking and scanning technique. Skin Research and Technology. 2017 Oct 23.

Rashed D, Shah D, Freeman A, Cook RJ, Hopper C, Perrett CM. Rapid ex vivo examination of Mohs specimens using optical coherence tomography. Photodiagnosis and Photodynamic Therapy. 2017 Jun 12.

Alawi, A. Optical coherence tomography for preoperative evaluation for non-melanoma skin cancer, (PhD Thesis, 2014)

Coleman, A.J., Penney,
G.P., Richardson, T.J., Guyot, A., Choi, M.J., Sheth, N., Craythorne,
E., Robson, A. and Mallipeddi, R., 2014. Automated registration of optical coherence tomography and dermoscopy in the assessment of sub-clinical spread in basal cell carcinoma. Computer Aided Surgery, 19(1-3), pp.1-12.

Duffy, M., et al. "Motion tracking to enable pre-surgical margin mapping in basal cell carcinoma using optical imaging modalities: initial feasibility study using optical coherence tomography." SPIE BiOS. International Society for Optics and Photonics, 2014.

Alawi, S.A., Kuck, M., Wahrlich, C., Batz, S., McKenzie, G., Fluhr, J.W., Lademann, J. and Ulrich, M., 2013. Optical coherence tomography for presurgical margin assessment of non-melanoma skin cancer–a practical approach. Experimental dermatology, 22(8), pp.547-551.

Wang, K.X., Meekings, A., Fluhr, J.W., McKenzie, G., Lee, D.A., Fisher, J., Markowitz, O. and Siegel, D.M., 2013. Optical Coherence Tomography–Based Optimization of Mohs Micrographic Surgery of Basal Cell Carcinoma: A Pilot Study. Dermatologic Surgery, 39(4), pp.627-633.

Chan, C.S. and Rohrer, T.E., 2012. Optical coherence tomography and its role in Mohs micrographic surgery: a case report. Case reports in dermatology, 4(3), pp.269-274.

Pelosini, L., Smith, H.B., Schofield, J.B., Meeckings, A., Dhital, A. and Khandwala, M., 2013. In vivo optical coherence tomography (OCT) in periocular basal cell carcinoma: correlations between in vivo OCT images and postoperative histology. British Journal of Ophthalmology, 97(7), pp.890-894.

Pomerantz, R., Zell, D., McKenzie, G. and Siegel, D.M., 2011. Optical coherence tomography used as a modality to delineate basal cell carcinoma prior to Mohs micrographic surgery. Case reports in dermatology, 3(3), pp.212-218.

Cunha, D., Richardson, T., Sheth, N., Orchard, G., Coleman, A. and Mallipeddi, R., 2011. Comparison of ex vivo optical coherence tomography with conventional frozen-section histology for visualizing basal cell carcinoma during Mohs micrographic surgery. British Journal of Dermatology, 165(3), pp.576-580.

Hamdoon, Z., Jerjes, W., Upile, T. and Hopper, C., 2011. Optical coherence tomography-guided photodynamic therapy for skin cancer: case study. Photodiagnosis and photodynamic therapy, 8(1), pp.49-52.

ACTINIC KERATOSIS

Thamm JR, Welzel J, Schuh S. Diagnose und Therapie aktinischer Keratosen: Diagnosis and therapy of actinic keratosis. JDDG: Journal der Deutschen Dermatologischen Gesellschaft. 2024 May;22(5):675-91.

Fredman G, Wiegell SR, Haedersdal M, Untracht GR. Vascular feature identification in actinic keratosis grades I-III using dynamic optical coherence tomography with automated, quantitative analysis. Archives of Dermatological Research. 2024 Jun 15;316(7):391.

Fredman G, Haedersdal M, Philipsen PA, Andersen F, Bjerring P, Wiegell SR, Untracht GR. Vascular Characteristics of Treatment-resistant and-responsive Actinic Keratosis Identified with Dynamic Optical Coherence Tomography. Acta Dermato-Venereologica. 2024 Nov 25;104:42190.

Cantisani C, Musolff N, Azzella G, Gargano L, Di Guardo A, Longo C, Guida S, Rossi G, Rovaldi E, Rega F, Cocci Grifoni G. Tirbanibulin 1% Ointment Effectiveness for Actinic Keratosis Treatment Evaluated by Dynamic Optical Coherence Tomography. Dermatologic Therapy. 2024;2024(1):1018395.

Fredman G, Fuchs CS, Wenande E, Philipsen PA, Untracht GR, Andersen F, Bjerring P, Wiegell SR, Haedersdal M. Dynamic optical coherence tomography unveils subclinical, vascular differences across actinic keratosis grades I–III. Experimental Dermatology. 2024 Aug;33(8):e15153.

Kandolf L, Peris K, Malvehy J, Mosterd K, Heppt MV, Fargnoli MC, Berking C, Arenberger P, Bylaite-Bučinskiene M, Del Marmol V, Dirschka T. European consensus-based interdisciplinary guideline for diagnosis, treatment and prevention of actinic keratoses, epithelial UV-induced dysplasia and field cancerization on behalf of European Association of Dermato-Oncology, European Dermatology Forum, European Academy of Dermatology and Venereology and Union of Medical Specialists (Union Européenne des Médecins Spécialistes). Journal of the European Academy of Dermatology and Venereology. 2024 Mar 7.

Ortner VK, Johansen B, Kilov K, Mondragón AC, Duvold T, Kihl J, Ashcroft FJ, Feuerherm AJ, Laugesen CP, Espersen ML, Manole I. The Copenhagen Actinic Keratosis Study (COAKS). A decentralised clinical trial to evaluate tolerability, safety and efficacy of daily field-directed topical treatment with cytosolic phospholipase A2 inhibitor, AVX001, in participants with actinic keratosis: protocol for a randomised controlled phase I/IIa trial. BMJ open. 2022 Oct 1;12(10):e061012.

Hendel K, Mogensen M, Wenande E, Dierickx C, Haedersdal M, Togsverd-Bo K. Fractional 1,927 nm Thulium Laser Plus Photodynamic Therapy Compared and Combined for Photodamaged Décolleté Skin: A Side-by-Side Randomized Controlled Trial. Lasers in Surgery and Medicine. 2019 Dec 1.

Ruini C, Hartmann D, Bastian M, Ruzicka T, French L, Berking C, Braunmühl T. Non-invasive monitoring of subclinical and clinical actinic keratosis of face and scalp under topical treatment with ingenolmebutate gel 150 mcg/gby means of reflectance confocal microscopy and optical coherence tomography: new perspectives and comparison of diagnostic techniques. Journal of Biophotonics. 2019 Jan 17:e201800391.

Schmitz L, Hessam S, Scholl L, Reitenbach S, Segert MH, Gambichler T, Stockfleth E, Bechara FG. Argon plasma coagulation of actinic keratoses imaged by optical coherence tomography: an in-vivo study indicating a possible lesion-directed treatment. Journal of biophotonics. 2018 Jun 12:e201800075.

Friis, K.B.E., Themstrup, L. and Jemec, G.B.E., 2017. Optical coherence tomography in the diagnosis of actinic keratosis—A systematic review. Photodiagnosis and Photodynamic Therapy, 18, pp.98-104.

Banzhaf, C. A., Thaysen-Petersen, D., Bay, C., Philipsen, P. A., Mogensen, M., Prow, T. and Haedersdal, M. (2016), Fractional laser-assisted drug uptake: Impact of time-related topical application to achieve enhanced delivery. Lasers Surg. Med.. doi:10.1002/lsm.22610

MARKOWITZ O, SCHWARTZ M, FELDMAN E, BIEBER A, BIENENFELD A, NANDANAN N, SIEGEL DM. Defining Field Cancerization of the Skin Using Noninvasive Optical Coherence Tomography Imaging to Detect and Monitor Actinic Keratosis in Ingenol Mebutate 0.015%-Treated Patients. Journal of Clinical & Aesthetic Dermatology. 2016 May 1;9(5).

Themstrup, L. and Jemec, G.B., 2014. Optical coherence tomography and its role for delineating the thickness of keratinocyte dysplasia and neoplasia. In Actinic Keratosis (Vol. 46, pp. 95-100). Karger Publishers.

Maier, T., Cekovic, D., Ruzicka, T., Sattler, E.C. and Berking, C., 2015. Treatment monitoring of topical ingenol mebutate in actinic keratoses with the combination of optical coherence tomography and reflectance confocal microscopy: a case series. British Journal of Dermatology, 172(3), pp.816-818.

Themstrup, L., Banzhaf, C., Mogensen, M. and Jemec, G.B., 2012. Cryosurgery treatment of actinic keratoses monitored by optical coherence tomography: a pilot study. Dermatology, 225(3), pp.242-247.