Nano-Pulse Stimulation Technology

Scientific Publications on NPS Technology

1. Ross, EV, Newman, J, Ravichandran, J, Nuccitelli, R. Airborne particulate concentration during non-thermal nano-pulse stimulation wart clearance is negligible compared to thermal modalities. ***Lasers in Surgery and Medicine***. 2021; 1– 4. https://doi.org/10.1002/lsm.23468
2. Nuccitelli R, LaTowsky BM, Lain E, Munavalli G, Loss L, Ross EV, Jauregui L and Knape WA (2021), Safety and Efficacy of Nano-Pulse Stimulation Treatment of Non-Genital, Cutaneous Warts (Verrucae). ***Lasers in Surgery and Medicine***. https://doi.org/10.1002/lsm.23423
3. James Newman, Lauren Jauregui, William A. Knape, Edward Ebbers, Darrin Uecker, Darius Mehregan & Richard Nuccitelli (2020) A dose-response study of nanosecond electric energy pulses on facial skin, **Journal of Cosmetic and Laser Therapy**, 22:4-5, 195-199, DOI: 10.1080/14764172.2020.1827151
4. Munavalli, Girish S. MD; Zelickson, Brian D. MD; Selim, Mona M. MD; Kilmer, Suzanne L. MD; Rohrer, Thomas E. MD; Newman, James MD; Jauregui, Lauren BS¶; Knape, William A. BS¶; Ebbers, Edward BS¶; Uecker, Darrin MS¶; Nuccitelli, Richard PhD¶ Safety and Efficacy of Nanosecond Pulsed Electric Field Treatment of Sebaceous Gland Hyperplasia, **Dermatologic Surgery**: June 2020 - Volume 46 - Issue 6 - p 803-809 doi: 10.1097/DSS.0000000000002154
5. Nuccitelli, R., McDaniel, A., Connolly, R., Zelickson, B. and Hartman, H. (2020), Nano-Pulse Stimulation Induces Changes in the Intracellular Organelles in Rat Liver Tumors Treated In Situ. ***Lasers in Surgery and Medicine***, 52: 882-889. https://doi.org/10.1002/lsm.23239
6. Hruza, George J. MD, MBA; Zelickson, Brian D. MD; Selim, Mona M. MD; Rohrer, Thomas E. MD; Newman, James MD; Park, Hyoung BS, MBA; Jauregui, Lauren BS; Nuccitelli, Richard PhD; Knape, William A. BS; Ebbers, Edward BBA, MBA; Uecker, Darrin MS Safety and Efficacy of Nanosecond Pulsed Electric Field Treatment of Seborrheic Keratoses, ***Dermatologic Surgery***: September 2020 - Volume 46 - Issue 9 - p 1183-1189 doi: 10.1097/DSS.0000000000002278
7. Nuccitelli, Richard. (2019). Nano-Pulse Stimulation Therapy for the Treatment of Skin Lesions. ***Bioelectricity,*** Volume 1, Number 4, 235-239, 2019. DOI:10.1089/bioe.2019.0027. To read full-text or download PDF.
8. Kaufman, D., Martinez, M., Jauregui, L., Ebbers, E., Nuccitelli, R., Knape, W.A., Uecker, D. and Mehregan, D. (2020), A dose-response study of a novel method of selective tissue modification of cellular structures in the skin with nanosecond pulsed electric fields. ***Lasers in Surgery and Medicine*** *2019*, 52: 315-322. https://doi.org/10.1002/lsm.23145
9. Skeate JG, Da Silva DM, Chavez-Juan E, Anand S, Nuccitelli R, et al. (2018) Nano-Pulse Stimulation induces immunogenic cell death in human papillomavirus-transformed tumors and initiates an adaptive immune response. **PLOS ONE** 13(1): e0191311, January 2018. https://doi.org/10.1371/journal.pone.0191311
10. Nuccitelli, R., McDaniel, A., Anand, S. *et al.* Nano-Pulse Stimulation is a physical modality that can trigger immunogenic tumor cell death. ***Journal for ImmunoTherapy of Cancer****;5:32* (2017). https://doi.org/10.1186/s40425-017-0234-5
11. Nuccitelli, R., Wood, R., Kreis, M., Athos, B., Huynh, J., Lui, K., Nuccitelli, P. and Epstein, E.H., Jr (2014), First-in-human trial of nanoelectroablation therapy for basal cell carcinoma: proof of method. ***Experimental Dermatology***, 2014; 23(2):135-137. https://doi.org/10.1111/exd.12303
12. Nuccitelli, R., Tran, K., Lui, K., Huynh, J., Athos, B., Kreis, M., Nuccitelli, P. and De Fabo, E.C. (2012), Non-thermal Nanoelectroablation of UV-induced Murine Melanomas Stimulates an Immune Response. ***Pigment Cell & Melanoma Research*** 2012, 25: 618-629. https://doi.org/10.1111/j.1755-148X.2012.01027.x

Presentations and Posters of NPS Technology

13. Katz B. Multi-Center Study of Nano-Pulse Stimulation (NPS) Technology for the Treatment of Moderate-to-Severe Acne Vulgaris of the Back: A Feasibility Study. Presented at the **2021 American Society for Laser Medicine and Science (ASLMS) Annual Meeting**, virtual presentation May 2021.
14. Cohen J. A Feasibility Study of Non-Thermal Nano-Pulse Stimulation (NPS) Technology for Treating Common Nevi. Presented at the **2021 American Society for Laser Medicine and Science (ASLMS) Annual Meeting**, virtual presentation May 2021.
15. Kilmer S. Lower Energy Settings with Nano-Pulse Stimulation (NPS) Procedure to Treat Sebaceous Hyperplasia Yield High Efficacy and Superior Skin Recovery. Presented at the **2021 American Society for Laser Medicine and Science (ASLMS) Annual Meeting**, virtual presentation May 2021.
16. Lain E. Non-Thermal Nano-Pulse Stimulation (NPS) Procedure for Treating Cutaneous, Non-Genital Warts Shows High Clearance Efficacy with a Single Session. Presented at the **2021 American Society for Laser Medicine and Science (ASLMS) Annual Meeting**, virtual presentation May 2021.
17. Lain E. A Prospective, Non-Randomized, Multicenter Pivotal Study of Nano-Pulse Stimulation (NPS) for Treatment of Cutaneous Non-Genital Warts. Presented at the **2020 American Society for Dermatologic Surgery (ASDS)** Annual Conference, October 2020.
18. Munavalli G. Nano-Pulse Stimulation (NPS) Procedure to Treat Sebaceous Hyperplasia: A Dose-Ranging, Multi-Center, Pivotal Study. Presented at the **2020 American Society for Dermatologic Surgery (ASDS)** Annual Conference, October 2020.
19. Geronemus R. Nano-Pulse Stimulation (NPS) Technology. Presented at the **2020 American Society for Dermatologic Surgery (ASDS)** Annual Conference, October 2020.
20. Harmon C, Nestor M, Munavalli G, et al. A first human feasibility study of Nano-Pulse Stimulation (NPS) to evaluate the potential elimination of a biopsy-confirmed nodular or superficial BCC in a short-term treat and resect study design. Poster presentation at the **2020 American Society for Dermatologic Surgery (ASDS)** Annual Conference, October 2020.
21. LaTowsky B, Lain E, Loss L, et al. Prospective, Non-Randomized, Multicenter Pivotal Study of Nano-Pulse Stimulation (NPS) Technology for Cutaneous Warts on the Feet. Poster presentation at the **2020 American Society for Dermatologic Surgery (ASDS)** Annual Conference, October 2020.
22. Kilmer S. Nano-Pulse Stimulation Technology. Presented at the **2020 Masters of Aesthetics Symposium** (virtual), August 2020.
23. Ross EV. Aesthetic Trends: Nano-Pulse Stimulation Technology. Presented at the **2020 Symposium for Cosmetic Advances & Laser Education (SCALE)** (virtual), July 2020.
24. Munavalli, G. A Dose-Ranging, Multi-Center Pivotal Study Using the Nano-Pulse Stimulation Procedure for Sebaceous Hyperplasia. Presented at the **2020 American Society for Laser Medicine and Science (ASLMS)** Annual Meeting, virtual presentation July 2020.
25. Ross EV. Non-Thermal Nano-Pulse Stimulation (NPS) Technology for Treating Cutaneous, Non-Genital Warts: A Feasibility Study. Presented at the **2020 American Society for Laser Medicine and Science (ASLMS)** Annual Meeting, virtual presentation July 2020.
26. Rohrer T. Histologic and clinical comparison of scar cosmesis using nano-pulse stimulation vs. traditional surgical treatments of basal cell carcinoma. Presented at the **2020 American Society for Laser Medicine and Science (ASLMS)** Annual Meeting, virtual presentation July 2020.
27. Munavalli G, et al. Histologic and clinical comparison of scar cosmesis using nano-pulse stimulation vs. traditional surgical treatments of basal cell carcinoma. Presented at the **2020 International Master Course on Aging Science (IMCAS)** World Congress, January 2020.
28. Ross EV. High Amplitude Electromagnetic Fields - A New Player in Dermatology. Presented at **2020 ODAC Orlando Dermatology, Aesthetic & Surgical Conference**, January 2020.
29. Moy R. Nano-Pulse Stimulation Technology (What's New in Dermatologic Surgery). Presented at **2020 Winter Clinical Dermatology Conference**, January 2020.

30. Kilmer S, et al. Nano-Pulse Stimulation (NPS) Dose-Titration Study for the Treatment of Sebaceous Hyperplasia – A Multi-Center Pivotal Study. Presented at the **2020 Maui Derm for Dermatologists** Annual Meeting, January 2020.
31. Ross EV, et al. First Clinical Use of Non-Thermal Nano-Pulse Stimulation Technology for Treating Cutaneous, Non-Genital Warts. Presented at the **2019 American Society for Dermatologic Surgery (ASDS)** Annual Conference, October 2019.
32. Nestor M, et al. A Feasibility Study for the Treatment of Moderate to Severe Acne Vulgaris of the Back Using Nano-Pulse Stimulation Energy. Presented at the **2019 American Society for Dermatologic Surgery (ASDS)** Annual Conference, October 2019.
33. Munavalli G, et al. A Multicenter, Pivotal Study Using the Nano-Pulse Stimulation Procedure to Treat Sebaceous Hyperplasia Lesions. Presented at the **2019 American Society for Dermatologic Surgery (ASDS)** Annual Conference, October 2019.
34. Avram M. Nano-Pulse Stimulation Technology. Presented at the **2019 "Laser & Aesthetic Skin Therapy: What's the Truth?" Annual Meeting at Harvard Medical School**, October 2019.
35. Rohrer T. Hot Topics: Nano-Pulse Stimulation. Presented at the **2019 Controversies & Conversations in Laser & Cosmetic Surgery Advanced Symposium**, August 2019.
36. Munavalli G. Safety and Efficacy of NPS in the Treatment of Sebaceous Hyperplasia and Verrucae. Presented at the **2019 Controversies & Conversations in Laser & Cosmetic Surgery Advanced Symposium**, August 2019.
37. Zelickson B. Nano-Pulse Stimulation (NPS) Technology for Treating Tattoos and Basal Cell Carcinomas – Initial Observations. Presented at the **2019 Controversies & Conversations in Laser & Cosmetic Surgery Advanced Symposium**, August 2019.
38. Kilmer S, et al. First Clinical Use of Non-Thermal Nano-Pulse Stimulation Procedure to Eliminate Sebaceous Hyperplasia Lesions. Presented at the **2019 American Society for Laser Medicine and Science (ASLMS)** Annual Meeting, March 2019.
39. Ross EV, et al. High Amplitude, Nanosecond Electrical Pulsing for Warts. Presented at the **2019 American Society for Laser Medicine and Science (ASLMS)** Annual Meeting, March 2019.
40. Munavalli G, et al. Safety and Efficacy of Nano-Pulse Stimulation in the Treatment of Patients with Sebaceous Hyperplasia. Presented at the **2019 American Academy of Dermatology (AAD)** Annual Meeting, March 2019.
41. Kilmer S, et al. Histology of Cellular Sebaceous Glands After Nano-Pulse Stimulation Procedure Demonstrates Mechanism for High Sebaceous Hyperplasia Clearance Rate in Clinical Use. Presented at the **2019 Maui Derm for Dermatologists** Annual Meeting, January 2019.
42. Hruza G, et al. A Non-Thermal Method for Clearing Seborrheic Keratoses Using a Novel Nano-Pulse Electrical Energy Source. Presented at the **2018 American Society for Dermatologic Surgery (ASDS)** Annual Meeting, October 2018.
43. Kaufman D, et al. A Dose-Response Study of a Novel Non-Thermal Method of Selectively Modifying Cellular Structures in Skin with Low Energy Nanosecond Electrical Stimulation. Presented at the **2018 American Society for Laser Medicine and Surgery (ASLMS)** Annual Meeting and received the ***Best of Basic Science and Translational Research Award***, April 2018.
44. Rohrer T, et al. First Clinical Use of Non-Thermal Nano-Pulse Stimulation Treatment to Eliminate Seborrheic Keratosis Lesions. Presented at the **2018 American Society for Laser Medicine and Surgery (ASLMS)** Annual Meeting, April 2018.

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