

Nano-Pulse Stimulation Technology

Scientific Publications on NPS Technology

1. 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 Surg Med*. <https://doi.org/10.1002/lsm.23423>
2. Newman J, Jauregui L, Knape W, Ebbers E, Uecker D, Mehregan D, Nuccitelli R. A dose-response study of nanosecond electric energy pulses on facial skin, *Journal of Cosmetic and Laser Therapy*, DOI: [10.1080/14764172.2020.1827151](https://doi.org/10.1080/14764172.2020.1827151)
3. Munavalli G, Zelickson B, Selim M, Kilmer S, Rohrer T, Newman J, et al. Safety and Efficacy of Nanosecond Pulsed Electric Field Treatment of Sebaceous Gland Hyperplasia. *Dermatologic Surgery* 2020; 46: 803–809
4. Nuccitelli R, Zelickson B, et al. Nano-Pulse Stimulation Induces Changes in the Intracellular Organelles in Rat Liver Tumors Treated In Situ. *Lasers in Surgery and Medicine* 2020; 52:882–889.
5. Nuccitelli R. Nano-Pulse Stimulation Therapy for the Treatment of Skin Lesions. *Bioelectricity*, Volume 1, Number 4, 235-239, 2019.
6. Hruza G, Zelickson B, Selim M, Rohrer T, Newman J, et al. Safety and Efficacy of Nanosecond Pulsed Electric Field Treatment of Seborrheic Keratoses. *Dermatologic Surgery* 46(9):1183-1189, September 2020.
7. Kaufman D, et al. 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.
8. Nuccitelli R, et al. First-in-human trial of nanoelectroablation therapy for basal cell carcinoma: proof of method. *Exp Dermatol* 2014; 23(2):135-137
9. Nuccitelli R, et al. Nano-Pulse Stimulation is a physical modality that can trigger immunogenic tumor cell death. *Journal for ImmunoTherapy of Cancer* 2017;5:32.
10. Nuccitelli R, et al. Non-thermal Nanoelectroablation of UV-Induced Murine Melanomas Stimulates an Immune Response. *Pigment Cell Melanoma Res* 2012; 25:618–29.
11. Skeate, J, et al. 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.

Presentations and Posters of NPS Technology

12. 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.
13. 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.
14. Geronemus R. Nano-Pulse Stimulation (NPS) Technology. Presented at the **2020 American Society for Dermatologic Surgery (ASDS) Annual Conference**, October 2020.
15. 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.
16. 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.

17. Kilmer S. Nano-Pulse Stimulation Technology. Presented at the **2020 Masters of Aesthetics Symposium** (virtual), August 2020.
18. Ross EV. Aesthetic Trends: Nano-Pulse Stimulation Technology. Presented at the **2020 Symposium for Cosmetic Advances & Laser Education (SCALE)** (virtual), July 2020.
19. 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.
20. 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.
21. 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.
22. 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.
23. Ross EV. High Amplitude Electromagnetic Fields - A New Player in Dermatology. Presented at **2020 ODAC Orlando Dermatology, Aesthetic & Surgical Conference**, January 2020.
24. Moy R. Nano-Pulse Stimulation Technology (What's New in Dermatologic Surgery). Presented at **2020 Winter Clinical Dermatology Conference**, January 2020.
25. 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.
26. 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.
27. 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.
28. 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.
29. 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.
30. Rohrer T. Hot Topics: Nano-Pulse Stimulation. Presented at the **2019 Controversies & Conversations in Laser & Cosmetic Surgery Advanced Symposium**, August 2019.
31. 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.
32. 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.
33. 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.
34. 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.
35. 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.

36. 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.
37. 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.
38. 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.
39. 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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