

	PEER REVIEWED PUBLISHED STUDIES	APPLICATIONS
1.	<p>The Use of Picosecond Lasers Beyond Tattoo <i>Forbat E., Al-Niaimi F. Journal of Cosmetic and Laser Therapy. Review Article accepted May 6, 2016.</i></p> <ul style="list-style-type: none"> PicoSure literature search highlights the growing indications beyond tattoo Evidence summary; picosecond safety and efficacy advantages 	Skin Revitalization
2.	<p>The Histology of Skin Treated with a Picosecond Alexandrite Laser and a Fractional Lens Array <i>Tanghetti, E. Lasers Surg Med. Published online June 1, 2016.</i></p> <ul style="list-style-type: none"> Comprehensive clinical/histological summary about LIOBs and results Credible scientific explanation and discussion about these unique 755nm/ Focus cellular effects and the substantial clinical benefits 	Skin Revitalization Histology
3.	<p>Picosecond Laser With Specialized Optic for Facial Rejuvenation Using a Compressed Treatment Interval <i>Khetarpal S, Desai S, Kruter L, Prather H, et al. Lasers Surg Med. Published online August 22, 2016.</i></p> <ul style="list-style-type: none"> A 2-3 week treatment interval expedites results without increasing side effects This study further supports the 755nm/Focus safety profile Protocol: ST I-III (mostly II & III), pretreatment topical anesthetic or air cooling, 0.71 J/cm² with 6 mm spot size Focus Lens, 10 Hz, 750 ps, 3-7 passes average 6253 pulses, 4 treatments in 2-3 weeks intervals 	Skin Revitalization
4.	<p>Safety and Efficacy of a Novel Diffractive Lens Array Using a Picosecond 755nm Alexandrite Laser for Treatment of Wrinkles <i>Weiss, R.A., McDaniel, D.H., Weiss, M.A., Mahoney, A.M., Beasley, K.L. and Halvorson, C.R. (2017). Lasers Surg. Med. 49: 40-44. doi:10.1002/lsm.22577</i></p> <ul style="list-style-type: none"> 755nm/Focus shows reduced appearance of wrinkles & photodamage 90% patient satisfaction; blinded MD grading 6 months post treatment showed improvement (Avg Fitzpatrick wrinkle scores went from 5.48 to 3.47) Protocol: ST I-IV, 0.71 J/cm² with 6 mm spot size Focus Lens, 10 Hz, 750 ps, 4 passes, 5000 pulses, 4 treatments in 4 weeks intervals 	Skin Revitalization Wrinkles

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5.	<p>Three-Year Results of Facial Photoaging in Asian Patients After Alexandrite 755 nm Picosecond Laser With Diffractive Lens Array: A Split-Face, Single-Blinded, Randomized Controlled Comparison</p> <p><i>Yu W, Zhu J, Yu W, et al. Three-Year Results of Facial Photoaging in Asian Patients After Alexandrite 755 nm Picosecond Laser With Diffractive Lens Array: A Split-Face, Single-Blinded, Randomized Controlled Comparison. Lasers in Surgery and Medicine. February 2021. doi:10.1002/lsm.23393</i></p> <ul style="list-style-type: none"> ■ 10 Patients receiving 10 treatments at two-week intervals with one half of the face randomly selected for treatment. ■ Dyschromia, skin texture, and rhytids all improved significantly on the treated side of the face compared to the control side of the face up to 36 months post treatment protocol ■ 36 months post treatment 7/10 of the subjects were satisfied with their results and no patients were dissatisfied with their results. ■ Protocol: ST III-IV, 0.4 J/cm² with 8mm spot size, 10-Hz pulse rate, 10 treatments every 2 weeks ■ Endpoint: moderate erythema (~2,000-3,000 pulses) ■ Post treatment care: cold packs for 30 minutes, daily SPF 30 sunscreen 	Skin Revitalization
6.	<p>Evaluation of the Safety and Efficacy of the Picosecond Alexandrite Laser with Specialized Lens Array for Treatment of the Photoaging Décolletage</p> <p><i>Wu DC, Fletcher L, Guiha I, Goldman MP. Lasers in Surgery and Medicine. 2016;48:188-192.</i></p> <ul style="list-style-type: none"> ■ Significant improvement seen in dyspigmentation, keratosis, and texture ■ 755nm/Focus safely & effectively revitalizes photodamaged décolletage ■ Protocol: ST I-IV, pretreatment topical anesthetic, 0.71 J/cm² with 6 mm spot size Focus Lens, 10 Hz, 2-4 passes until a minimum of 3,500 pulses, 2-4 treatments in 3 weeks intervals ■ Endpoint: moderate erythema, mild greying or frosting discrete pigmentary lesions or rhytides ■ Post treatment care: application of petrolatum ointment 	Photoaging Décolletage

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7.	<p>Comparison of the Cutaneous Thermal Signatures Over Twenty-Four Hours With a Picosecond Alexandrite Laser Using a Flat or Fractional Optic Tanghetti EA, Tartar DM. <i>J Drugs Dermatol.</i> 2016;15(11):1347-1352.</p> <ul style="list-style-type: none"> ■ Focus treatment initiates a significant clinical and delayed thermal effect ■ Suggests that enhanced inflammatory cascade leads to dermal remodeling 	<p>Skin Revitalization Flat vs. Focus</p>
8.	<p>Fractional resurfacing in the Asian patient: Current state of the art Wat H, Wu DC, Chan HHL. <i>Lasers in Surgery and Medicine.</i> 2017;49(1):45-59. doi:10.1002/lsm.22579</p> <ul style="list-style-type: none"> ■ Picosecond lasers produce substantially less nonspecific photothermal damage therefore they may represent an excellent option for photo rejuvenation in Asian patients. 	<p>Skin Revitalization</p>
9.	<p>Evaluation of the Safety and Efficacy of a Low Fluence, Picopulsed Alexandrite Laser in a Pico-Toning Technique With a Diffractive Lens Optic for the Treatment of Photodamaged and Textural Improvement in "Off the Face" Applications Saluja R. <i>J Drugs Dermatol.</i> 2016;15(11):1398-1401.</p> <ul style="list-style-type: none"> ■ Significant improvement shown in pigmentation, texture and rhytides ■ Pico755/Focus is safe and effective treatment for the hands and décolletage ■ Protocol: ST II-IV, pretreatment topical anesthetic on décolletage patients, air cooling during treatment, 0.71 J/cm² with 6 mm spot size Focus Lens, 10 Hz, 4-6 passes, average 2425 pulses on the hand group and 5683 pluses on the décolletage group, 4 treatments in 3 weeks intervals ■ Endpoint: moderate erythema, a mild white ash coloration to lentigines or darkening of dyschromia ■ Post treatment care: physical sunscreen SPF at least 30 	<p>Skin Revitalization On the Body</p>

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10.	<p>A Prospective Split-Face Study of the Picosecond Alexandrite Laser With Specialized Lens Array for Facial Photoaging in Chinese Ge Y, Guo L, Wu Q, Zhang M, Zeng R, Lin T. <i>J Drugs Dermatol.</i> 2016;15(11):1390-1396.</p> <ul style="list-style-type: none"> ■ Significant improvement in photoaged tissue observed 2 months post treatment ■ Measureable improvement ($p < 0.05$) in both wrinkles and pigmentation; and no changes were observed on the control side ■ Protocol: ST III-IV, 0.4-0.71 J/cm² with 6-8 mm spot size Focus Lens, 2.5-5 Hz, 2-3 passes, average 1500 pulses on the treatment side (half face), 4 treatments in 2 weeks intervals ■ Endpoint: moderate erythema ■ Post treatment care: cooling mask immediately after treatment, application of moisturizer, sun block 	Skin Revitalization in Chinese
11.	<p>Efficacy and Safety of Picosecond 755-nm Alexandrite Laser with Diffractive Lens Array for Non-Ablative Rejuvenation in Chinese Skin Wat H, Yee-nam Shek S, Yeung CK, Chan HH. <i>Lasers in Surgery and Medicine.</i> 2019;51(1):8-13. doi:10.1002/lsm.23014</p> <ul style="list-style-type: none"> ■ The 755-nm picosecond laser with Focus Lens is a safe and effective non-ablative modality for targeting facial skin texture irregularities and dyspigmentation in Chinese skin. ■ Patients tolerated the treatment well with adverse effects limited to transient erythema and edema. ■ Protocol: ST III-IV, pretreatment topical anesthetic, 0.4-0.71 J/cm² with 6-8 mm spot size Focus Lens, 5-10 Hz, 4 passes, 6 treatments in 4 weeks intervals ■ Post treatment care: patients received a cooling pad and a petrolatum-based ointment immediately following each treatment. 	Skin Revitalization in Chinese
12.	<p>Using Normal and High Pulse Coverage With Picosecond Laser Treatment of Wrinkles and Acne Scarring: Long Term Clinical Observations Dierickx C. <i>Lasers Surg Med.</i> Published online 15 November 2017.</p> <ul style="list-style-type: none"> ■ No additional benefit in using more than average number (5000-6000) of pulses in Focus treatments on face for ST II-IV. ■ Protocol: ST II-IV, 0.57 J/cm² with 6 mm spot size Focus Lens, 10 Hz, 4 passes, 3301± pulses on half of the face; 5867±500 pulses on another half of face, 5 treatments in 4 weeks intervals 	Wrinkles Acne Scars

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13.	<p>Use of a Picosecond Pulse Duration Laser With Specialized Optic for Treatment of Facial Acne Scarring <i>Brauer JA, Kazlouskaya V, Alabdulrazzaq H, Bae YS, Bernstein LJ, Anolik R, Heller PA, Geronemus RG. JAMA Dermatol. Published online November 19, 2014.</i></p> <ul style="list-style-type: none"> ■ 25% improvement after a series of treatments, with minimal patient downtime ■ Pigment lightening and dermal remodeling (visual & histological) ■ Protocol: ST I-V, 0.71 J/cm² with 6 mm spot size Focus Lens, 750 ps, 5 Hz, 2305-4017 pluses depends on STs, 6 treatments in 4-8 weeks intervals ■ Endpoint: transient erythema and edema ■ Post treatment care: broad-spectrum sunscreen daily, antiviral prophylaxis with acyclovir for 4 days after treatment 	Acne Scars
14.	<p>A Comparative Study With a 755nm Picosecond Alexandrite Laser With a Diffractive Lens Array and a 532nm/1,064nm Nd:YAG With a Holographic Optic <i>Tanghetti E, Jennings J. Lasers Surg Med. Published online 7 November 2017</i></p> <ul style="list-style-type: none"> ■ PicoSure 755/Focus yields fewer side effects in terms of skin reaction and histology than fractionated 532 and 1064 24-hours after treatment. 	Skin Reaction Histology
15.	<p>Noninvasive Atrophic Acne Scar Treatment in Asians With a 755-nm Picosecond Laser Using A Diffractive Optic Lens—A Retrospective Photographic Review <i>Ching-Hsin Huang, Erick Chern, Jui-Hui Peng, Peter Hsien-Li Peng. Dermatol Surg. 2018;00:1-8.</i></p> <ul style="list-style-type: none"> ■ The 755-nm diffractive lens picosecond laser showed good efficacy and low PIH rates when treating atrophic acne scars in darker skin-type patients. ■ Protocol: no specific ST, pretreatment topical anesthetic, 0.71 J/cm² with 6 mm spot size Focus Lens, 10 Hz, 750ps, at least 3-4 passes (4-6 passes on acne scars area), average 2500 pulses on whole face, 2-12 treatments in 2-6 weeks intervals, mostly monthly intervals ■ Post treatment care: Short-term prophylactic antibiotic was prescribed for the prevention of acneiform eruption: oral doxycycline (100 mg b.i.d. for 3-7 days, starting immediately after treatment) and topical clindamycin gel. Low to mid potency topical steroids (potency 7 hydrocortisone cream and potency 5 betamethasone valerate cream) were prescribed, but only use in the case of itching or prolonged erythematous symptoms in the first week after treatment. 	Acne Scars

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16.	<p>755 nm picosecond laser for facial atrophic scar—Case reports of long-term clinical efficacy following up Huang C, Hsieh F, Chang H, Peng J, Peng HP. <i>Journal of Cosmetic Dermatology</i>. 2019;18(3):778-782. doi:10.1111/jocd.12925</p> <ul style="list-style-type: none"> ■ 755 nm picosecond laser with Focus is an effective and safe treatment with long-term efficacy in the treatment of acne atrophic scars without PIH. ■ 6 months post-final-treatment follow-up time should be considered to obtain and record the optimal efficacy of treatment. ■ Protocol: Taiwanese ST III-IV, Focus Lens with average 2500 pulses each treatment, 4-6 treatments in mostly 4 weeks intervals 	Acne Scars
17.	<p>Acne Scarring- Pathogenesis, Evaluation, and Treatment Options Connolly D, Vu HL, Mariwalla K, Saedi N. <i>The Journal of clinical and aesthetic dermatology</i>. 2017;10(9):12-23.</p> <ul style="list-style-type: none"> ■ PicoSure has been shown to improve the appearance and texture of atrophic rolling scars similar to fractional ablative lasers with a favorable safety profile that is reproducible across Skin Types I to V. 	Acne Scars
18.	<p>Evaluation of the Safety and Efficacy of a Picosecond Alexandrite Laser with DLA for Acne Scars in Chinese Patients Mengli Zhang, Jing Fang, Qiuju Wu, Tong Lin. <i>Lasers Surg Med</i>. 2019; DOI 10.1002/lsm.23177</p> <ul style="list-style-type: none"> ■ The acne scars texture and post-inflammatory erythema showed significant clinical improvements with 3 treatments of 755-nm picosecond alexandrite laser. ■ 70% patients showed more than 50% improvement with only transient and mild erythema and edema, which mostly disappeared within 2 days. ■ Protocol: ST III-IV, pretreatment topical anesthetic, 0.71 J/cm² with 6 mm spot size Focus Lens, 750ps, 5 Hz, 5 passes, 3 treatments in 4-6 weeks intervals ■ Post treatment care: ice packs for 15 min immediately post laser treatments. 	Acne Scars

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19.	<p>A randomized, single-blind, study evaluating a 755-nm picosecond pulsed Alexandrite laser vs. a nonablative 1927-nm fractionated thulium laser for the treatment of facial photopigmentation and aging</p> <p><i>Serra M, Bohnert K, Sadick N. Journal of Cosmetic and Laser Therapy. 2018;20(6):335-340. doi:10.1080/14764172.2018.1493513</i></p> <ul style="list-style-type: none"> ■ 755 nm group had statistically significant greater results with less pain and side effects in investigator assessments of photoaging/skin quality and subject satisfaction than those in the 1927 nm group. ■ Protocol: ST I-IV, pretreatment topical anesthetic, air cooling during treatment, for discrete pigmented lesions: 3-4 mm spot size; for full face revitalization: 6 mm spot size Focus Lens with 5000-8000 pluses, 4 treatments in 3 weeks intervals ■ Endpoint: frosting/whitening for discrete pigmented lesions ■ Post treatment care: topical sunscreen daily starting 1 week prior to baseline therapy and continue using it throughout the entire study. 	Pigmented Lesions Skin Revitalization
20.	<p>Applications of picosecond lasers beyond tattoos: pigment reduction and tissue remodeling</p> <p><i>Forbat E, Ali F, Al-Niaimi F. Lasers in Medical Science. 2017;32(5):1219-1219. doi:10.1007/s10103-017-2163-4</i></p> <ul style="list-style-type: none"> ■ The use of picosecond lasers beyond tattoo treatment is positive with examples of the treatment of nevus of Ota, minocycline induced pigmentation, acne scarring and rhytides. 	Pigmented Lesions Skin Revitalization
21.	<p>Using Reflectance Confocal Microscopy to Observe In Vivo Melanolysis After Treatment With the Picosecond Alexandrite Laser and Q-Switched Nd:YAG Laser in Melasma</p> <p><i>Jo, D.J., Kang, I.H., Baek, J.H., Gwak, M.J., Lee, S.J. and Shin, M.K. (2019), Lasers Surg. Med., 51: 423-429. doi:10.1002/lsm.23025</i></p> <ul style="list-style-type: none"> ■ The distribution of melanin could be considered using RCM for following-up and monitoring the response to therapy. 	Melasma

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22.	<p>A split-face study: comparison of picosecond alexandrite laser and q-switched Nd:YAG laser in the treatment of melasma in Asians <i>Lee M-C, Lin Y-F, Hu S, et al. Lasers in Medical Science. 2018;33(8):1733-1738. doi:10.1007/s10103-018-2529-2</i></p> <ul style="list-style-type: none"> ■ 755 nm alexandrite picosecond laser has been observed to achieve a faster and better clearance rate for melasma compared to 1064 nm QS-Nd:YAG laser in a Asian split-face study. ■ Protocol: ST III-IV, pretreatment topical anesthetic, air cooling during treatment, 0.88-1.18 J/cm² with 4.4-5.1 mm spot size, 650ps, 3 passes, average 1000 pulses on the right side of the face, 4 treatments in 4 weeks intervals ■ Endpoint: mild erythema and swelling without petechiae ■ Post treatment care: ice packs for 15 min immediately post treatments. Oral tranexamic acid 250 mg 3 times 1 day for 1 week after each treatment. sunscreen SPF 50 during the daytime and 3% topical tranexamic acid whitening essence at night. 	Melasma
23.	<p>Efficacy and safety evaluation of picosecond alexandrite laser with a diffractive lens array for treatment of melasma in asian patients by VISIA imaging system <i>Chen Y-T, Lin E-T, Chang C-C, et al. Photobiomodulation, Photomedicine, and Laser Surgery. 2019;37(9):559-566. doi:10.1089/photob.2019.4644</i></p> <ul style="list-style-type: none"> ■ Three sessions of picosecond 755-nm alexandrite laser with a DLA were effective for melasma treatment in Asian patients with minimal side effects. ■ Protocol: ST IV, 0.4 J/cm² with 8 mm spot size Focus Lens, 750ps, 10 Hz, 2 passes, 2000-2500 pulses, 3 treatments in 4-6 weeks intervals ■ Endpoint: mild erythema ■ Post treatment care: application of a broad-spectrum sunscreens with SPF 50+ every 2-3 h during indoor and outdoor activities 	Melasma

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24.	<p>Prospective randomized controlled trial comparing treatment efficacy and tolerance of picosecond alexandrite laser with a diffractive lens array and triple combination cream in female asian patients with melasma</p> <p>Wang, Y.-J., Lin, E.-T., Chen, Y.-T., Chiu, P.-C., Lin, B.-S., Chiang, H.-M., Huang, Y.-H., Wang, K.-Y., Lin, H.-Y., Chang, T.-M. and Chang, C.-C. (2020) <i>Journal of the European Academy of Dermatology and Venereology</i>. doi:10.1111/jdv.15934</p> <ul style="list-style-type: none"> ■ Picosecond alexandrite laser treatment using DLA showed comparable efficacy with TCC topical therapy for the treatment of melasma with improvements in texture, spots, wrinkles and pores up to 3 months after the last treatment due to the continuous neocollagenesis. ■ Protocol: ST IV, 0.4 J/cm² with 8 mm spot size Focus Lens, 750ps, 2 passes, around 2500 pulses, 3-5 treatments in 4 weeks intervals ■ Endpoint: mild erythema ■ Post treatment care: using baby wash and moisturizing lotion daily and sunscreen SPF 50+, PA++++ every 2 hours during the daytime. 	Melasma
25.	<p>A Prospective, Split-Face, Randomized Study Comparing a 755-nm Picosecond Laser With and Without Diffractive Lens Array in the Treatment of Melasma in Asians</p> <p>Woraphong Manuskiatti, Chadakan Yan, Ploypailin Tantrapornpong, Kathryn Anne G. Cembrano, Thanya Techapichetvanich, Rungsima Wanitphakdeedecha. <i>Lasers in Surgery and Medicine</i>. (2020) DOI 10.1002/lsm.23312</p> <ul style="list-style-type: none"> ■ After 5 treatments, pigment clearance significantly improved on each side in the treatment of the mixed-type melasma on FST IV and V. There is a trend toward better pigment clearance from 1 to 6 mths post final treatment. ■ 755-nm picosecond laser treatment provide longer remission intervals compared with other laser and light options since the maintenance of the clinical outcome was as long as 6 months after the treatment was discontinued without the use of any topical bleaching preparations as post-treatment maintenance. ■ Protocol: ST IV-V, air cooling during treatment, 0.4 J/cm² with 8 mm spot size Focus Lens on one side, Flat Lens on another side, 750 ps, 2.5 Hz, 2 passes, 5 treatments in 4 weeks intervals ■ Post treatment care: application of a broad-spectrum sunscreen with SPF 50 	Melasma

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26.	<p>Treatment of Refractory Melasma in Asians With the Picosecond Alexandrite Laser <i>Niwat Polnikorn, Emil Tanghetti. Dermatol Surg. 2020 Sep 8. doi: 10.1097/DSS.0000000000002612.</i></p> <ul style="list-style-type: none"> ■ 60 Fitzpatrick Skin Type IV to VI Thai females with refractory melasma were successfully treated by both flat optic and Focus Lens on a sunny climate. The patients treated with Focus Lens had a lower percentage of complications and a better outcome. ■ 6 months after the last treatment, 18.5% difference between two groups with a 75.7% improvement in the MSI in Group 2 with Focus Lens and a 57.2% improvement in the MSI in Group 1 with flat optic. ■ 5% recurrence of melasma with no PIH in Group 2 in contrast to 16% recurrence of melasma with 21% transient PIH in Group 1. In patients with melasma, PicoSure with DLA may alleviate pigmentation disorder and the related photoaging characteristics (e.g., wrinkled skin and increased vascularity), and the effects may be maintained 1 year post last treatment. ■ Protocol: ST IV-VI, 1.02-1.5 J/cm² with 3-4mm spot size on Flat Optic group, 0.4 J/cm² with 8mm spot size on Focus Len group, 1 pass, 6 treatments in 2 weeks intervals ■ Endpoint: immediate grayish discoloration on Flat Optic, transient erythema on Focus Lens ■ Post treatment care: application of topical emollient, sun avoidance, and broad-spectrum sunscreen. Topical 4% alpha arbutin and 15% ascorbyl phosphate palmitate sodium for prevention of PIH. 	Melasma
27.	<p>Treatment of melasma and PIH by picosecond 755 nm alexandrite laser in asian patients <i>Lee YJ, Shin HJ, Noh T-K, Choi K-H, Chang S-E. Annals of dermatology. 2017;29(6):779-781. doi:10.5021/ad.2017.29.6.779</i></p> <ul style="list-style-type: none"> ■ Picosecond 755-nm Alexandrite Laser provided effective treatments of intractable melasma and PIH with fewer adverse events in dark Asian skin. ■ Protocol: ST IV, on 2 melasma cases: 0.57 J/cm² with 6 mm spot size, 6 and 14 treatments in 2 weeks intervals; on PIH case: 5.25 J/cm² with 2 mm spot size, 7 treatments in 2 weeks intervals 	Melasma Hyperpigmentation

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28.	<p>Photoaging Reversibility in Asian Patients With Melasma Treated Using Picosecond Lasers With Diffractive Lens Array: A 1-Year Prospective Observational Cohort Study <i>Erh-Ti Lin, Hsiu-Mei Chiang, Bor-Shyh Lin, Yung-Hsueh Huang, Chang-Cheng Chang. ISSN: 1076-0512 · Dermatol Surg 2020;00:1-6 · DOI: 10.1097/DSS.0000000000002405</i></p> <ul style="list-style-type: none"> ■ In patients with melasma, PicoSure with DLA may alleviate pigmentation disorder and the related photoaging characteristics (e.g., wrinkled skin and increased vascularity), and the effects may be maintained 1 year post last treatment. ■ Protocol: ST IV, pretreatment topical anesthetic, 0.4 J/cm² with 8 mm spot size Focus Lens, 750ps, 10 Hz, 2 passes, around 2500 pulses, 3-5 treatments in 4 weeks intervals ■ Endpoint: mild erythema without petechiae ■ Post treatment care: skin was cooled for 15 minutes with icepacks post treatment. all patients were using same broad-spectrum sunscreen with SPF 50+ and protection grade of ultraviolet (UV) A band ++++ and the same baby moisturizers every 2 hours during daytime 	Melasma
29.	<p>Picosecond alexandrite laser for Naevus of Ota treatment in Chinese Peng L, Yang Y, Ge YP, Lin T. Journal of the European Academy of Dermatology and Venereology. Published online 6 February 2018.</p> <ul style="list-style-type: none"> ■ The 755nm picosecond laser is effective at treating nevus of Ota in Chinese patients. ■ Protocol: ST III-IV, 1.95-6.37 J/cm² with 2-4 mm spot size, 750ps, 1-5 treatments 	Nevus of Ota

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30.	<p>A Split-Face, Single-Blinded, Randomized Controlled Comparison of Alexandrite 755 nm Picosecond Laser vs. Alexandrite 755 nm Nanosecond Laser in the Treatment of Acquired Bilateral Nevus of Ota-like Macules (ABNOM)</p> <p>Yu W, Zhu J, Yu W, Lyu W, Lyu D, Lin X, Zhang Z. <i>Journal of the American Academy of Dermatology</i>. Published online 27 December 2017.</p> <ul style="list-style-type: none"> ■ The 755nm achieved significantly better clearance with less severe pain and lower incidence rate of post-inflammatory hyperpigmentation (PIH). ■ Protocol: ST III-IV, 4.07-6.37 J/cm² with 2-2.5 mm spot size, 2.5 Hz, 1 pass, 3 treatments in 6 months intervals ■ Endpoint: slight whitening, without bleeding and tissue splatter ■ Post treatment care: treated areas were cooled with cold packs for 30 minutes, application of a topical antibiotic ointment until healed, followed by regular (at least every 2 hours) application of sunscreen with a minimum SPF of 30 	Acquired Bilateral Nevus of Ota-like Macules (ABNOMs)
31.	<p>Treatment of Nevus of Ota With a Picosecond 755-nm Alexandrite Laser</p> <p>Chesnut C, Diehl J, Lask G. <i>Dermatol Surg</i>. 2015;41:508–536.</p> <ul style="list-style-type: none"> ■ Significant Nevus of Ota clearance after only 2 treatments with PicoSure ■ QS-Recalcitrant Nevus of Ota can be successfully treated with Pico 755 ■ Protocol: ST IV, pretreatment topical anesthetic, 2.08-2.83 J/cm², 3-3.5 mm spot size, 2-3 treatments in 6-8 weeks intervals ■ Endpoint: mild and transient localized edema and erythema 	Nevus of Ota
32.	<p>Successful and quick treatment of nevus of Ota with 755nm picosecond laser in Chinese</p> <p>Binping Luo, Liyang Kang, Jianyun Lu <i>JOURNAL OF COSMETIC AND LASER THERAPY</i>.2020</p> <ul style="list-style-type: none"> ■ Pico 755nm laser achieved almost total clearance of treatment of nevus of Ota in Chinese by only one or two sessions. ■ Protocol: Chinese children no specific ST, pretreatment topical anesthetic, 2.49-3.25 J/cm² with 2.8-3.2mm spot size, 750ps, 1-2 treatments mostly 1 treatment ■ Endpoint: a little whitening ■ Post treatment care: Ice towels were applied to the treated area immediately for cold compress for about 30–40 min. 	Nevus of Ota

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33.	<p>Usefulness of picosecond pulse alexandrite laser treatment for nevus of Ota <i>Sakio R., Ohshiro T., Sasaki K., Ohshiro T. Laser therapy : an international journal of low level laser therapy and photobioactivation. 2018;27(4):251-255. doi:10.5978/islsm.27_18-OR-22</i></p> <ul style="list-style-type: none"> ■ Pico 755 nm laser treatment is efficacious for the treatment of Nevus of Ota with minimum adverse events. ■ Protocol: no specific ST, 4.07-6.37 J/cm² with 2.2-2.5 mm spot size, 750ps, average 2.5 treatments in 4.1 months intervals ■ Endpoint: immediate slight-whitening phenomena over lesion 	Nevus of Ota
34.	<p>Comparison of a picosecond alexandrite laser versus a Q-switched alexandrite laser for the treatment of nevus of Ota: A randomized, split-lesion, controlled trial <i>Ge Y, Yang Y, Guo L, et al. Journal of the American Academy of Dermatology. 9999. doi:10.1016/j.jaad.2019.03.016</i></p> <ul style="list-style-type: none"> ■ Picosecond alexandrite laser achieved a better clearance with fewer sessions and lower incidences of post-inflammatory dyspigmentations, demonstrating better clinical outcomes and fewer adverse events compared with Q-switched alexandrite laser. ■ Protocol: ST III-V, pretreatment topical anesthetic, 1.59-6.37 J/cm² with 2-4 mm spot size, 5 Hz, 1 pass, 6 treatments in 12 weeks intervals ■ Endpoint: Moderate dermal whitening without obvious bleeding or tissue splatter ■ Post treatment care: an antibiotic cream was immediately applied on the treated areas and subsequently cooled by cold packs for 30-60 minutes. Patients were instructed to apply the cream twice a day until the lesions healed. Sunscreens were also advised. Hydroquinone 3% cream or arbutin 3% cream was used on PIH area. 	Nevus of Ota
35.	<p>Picosecond pulse duration laser treatment for dermal melanocytosis in Asians: A retrospective review <i>Ohshiro T, Ohshiro T, Sasaki K, Kishi K. Laser therapy : an international journal of low level laser therapy and photobioactivation. 2016;25(2):99-104. doi:10.5978/islsm.16-OR-07</i></p> <ul style="list-style-type: none"> ■ 755 nm and 1064 nm ps-lasers are efficacious for the treatment of dermal pigment lesions such as nevus of Ota with minimum adverse events. ■ Protocol: ST III-IV, 2.83-5.26 J/cm² with 2.2-3 mm spot size, 750ps, 1-3 treatments 	Nevus of Ota

	PEER REVIEWED PUBLISHED STUDIES	APPLICATIONS
36.	<p>Efficacy and safety of the picosecond 755-nm alexandrite laser for treatment of dermal pigmentation in Asians—a retrospective study <i>Sindy Hu, Ching-Sheng Yang, Shyue-Luen Chang, Yau-Li Huang, Ying-Fang Lin, Mei-Ching Lee Springer-Verlag London Ltd., part of Springer Nature 2020</i></p> <ul style="list-style-type: none"> Faster clearance could be achieved by the Pico 755-nm laser for treating nevus of Ota and acquired bilateral nevus of Ota-like macules in Asians. The treatment is well tolerable with minimal temporary side effects. Protocol: ST III-IV, pretreatment topical anesthetic, 2.73-3.98 J/cm², 2.4-2.9 mm spot size, 650ps, 1-4 treatments in 3-12 months interval Endpoint: mild immediate whitening without petechia Post treatment care: topical tetracycline ointment twice a day and tranexamic acid 250 mg three times a day for 1 week, also sunscreen with SPF 50 as a daily routine skin care. Hydroquinone was utilized only in 2 cases which developed temporary hyperpigmentation. 	<p>Nevus of Ota Acquired Bilateral Nevus of Ota-Like Macules (ABNOM)</p>
37.	<p>A Retrospective Analysis on the Management of Pigmented Lesions Using a Picosecond 755-nm Alexandrite Laser in Asians <i>Chan JC, Shek SY, Kono T, Yeung CK, Chan HH. Lasers in Surgery and Medicine. Published online December 2015.</i></p> <ul style="list-style-type: none"> 755nm is safe and effective treatment for common Asian pigmentary conditions Lower risk of PIH and excellent Nevus of Ota clearance (versus QS/nano) Protocol: ST III-IV, pretreatment topical anesthetic, 1.76-6.37 J/cm² with 2.0-3.8 mm spot size, 1-10 Hz; Spot size, fluences, frequency, and pulse duration were based on the lesional characteristics and clinical endpoint, 1-8 treatments in 4-6 weeks intervals Endpoint: immediate whitening of the target pigmented lesions Post treatment care: application of topical corticosteroid (0.1% mometasone furoate ointment diluted with vaseline in 1:4 ratio) under occlusion for 15 minutes. avoidance of sunlight exposure and use of SPF≥30 sunscreen. 	<p>Nevus of Ota Lentigines Becker's Nevus Hori's Macules Nevus of Spilus</p>

	PEER REVIEWED PUBLISHED STUDIES	APPLICATIONS
38.	<p>Safety of a Picosecond Laser with Diffractive Lens Array (DLA) in the Treatment of Fitzpatrick Skin Types IV to VI: a Retrospective Review Haimovic A, Brauer JA, Bae YS, Geronemus RG. <i>J Am Acad Dermatol</i>. Published online March 3, 2016.</p> <ul style="list-style-type: none"> ■ 755nm/Focus is safe & effective in dark skin types (acne scars, pigment) ■ Nicely summarizes the LIOB, pressurewave, & cell signaling explanation ■ Protocol: ST IV-VI, pretreatment topical anesthetic, 0.71 J/cm² with 6 mm spot size Focus Lens, 5 Hz, 2-4 passes, 3,000-7,000 pulses on facial cases ■ Endpoint: epidermal whitening, erythema, or edema ■ Post treatment care: application of a topical mid-potency steroid 2 times a day for 3 days after treatment. Eleven patients received laser treatment on their face were given prophylactic valacyclovir after the procedure. 	<p>Pigmentary Disorders in Darker Skin Types Atrophic and Hypertrophic Scars Pigmented Lesions</p>
39.	<p>Use of a Picosecond Alexandrite Laser for Treating Acquired Bilateral Nevus of Ota-Like Macules in Chinese Patients Hui Ding, Yin Yang, Lifang Guo, Tong Lin. <i>Lasers in Surgery and Medicine</i>. 2020. DOI 10.1002/lsm.23245</p> <ul style="list-style-type: none"> ■ In 225 cases, the patients underwent 1-4 treatments with >90% clinical clearance rates of 8.89%, 30.99%, 56.65%, and 60.00%, respectively. ■ Seven or more sessions are needed to receive an encouraging result when using QS lasers. ■ Protocol: ST III-IV, 1.26-6.37 J/cm² with 2.0-4.5 mm spot size, 5 Hz, 750ps, 1-4 treatments in 3-6 months intervals ■ Endpoint: mild to moderate whitening without purpura or splashing ■ Post treatment care: sunscreens (SPF > 30, PA+++) were advised. Arbutin 3% cream was used to improve hyperpigmentation. 	<p>Acquired Bilateral Nevus of Ota-Like Macules (ABNOM) In Chinese patients</p>

	PEER REVIEWED PUBLISHED STUDIES	APPLICATIONS
40.	<p>Successful Treatment of Under-Eye Pigmentation in Skin Type IV With a Picosecond Alexandrite Laser With Diffractive Lens Array <i>Monique J. Vanaman Wilson, Sally Alkhonizi, Douglas C. Wu. (2017). American Society for Dermatologic Surgery ISSN: 1076-0512 Dermatol Surg 2017;0:1–2</i></p> <ul style="list-style-type: none"> ■ After 1 PicoSure treatment using Focus Lens, the patient had near-complete clearance of under-eye pigmentation at the 3 months post treatment visit. ■ Protocol: ST IV, pretreatment topical anesthetic, 0.57 J/cm² with 6 mm spot size Focus Lens, 1 Hz, 550 ps, 2-4 passes, 167 pulses, single treatment ■ Endpoint: mild greying of the excessive pigmentation with minimal erythema ■ Post treatment care: Triamcinolone 0.1% ointment and sunscreen were applied immediately after the procedure. Daily gentle skin care and sun protection. 	Infraorbital Dark Circles
41.	<p>Prospective studies of the efficacy and safety of the picosecond 755, 1064 and 532 nm lasers for the treatment of infraorbital dark circles <i>Vanaman Wilson, M.J., Jones, I.T., Bolton, J., Larsen, L., Wu, D.C. and Goldman, M.P. (2018) Lasers Surg. Med., 50: 45-50. doi:10.1002/lsm.22754</i></p> <ul style="list-style-type: none"> ■ A series of three treatments with the fractionated picosecond 755nm laser resulted in significant improvement in infraorbital dark circles. ■ Protocol: ST I-IV, 0.71 J/cm² with 6 mm spot size Focus Lens, 1-5 Hz, 1 pass, minimum of 50 pulses per eye to no more than 150 pulses on both eyes, 3 treatments in 3 weeks intervals 	Infraorbital Dark Circles
42.	<p>Successful Treatment of Chronic Venous Stasis Hyperpigmentation of the Lower Limbs With the Picosecond Alexandrite Laser <i>Wu D, Goldman M. Dermatol Surg. 2017;0:1–3.</i></p> <ul style="list-style-type: none"> ■ Single-patient case showing safety and efficacy of PicoSure Focus on hyperpigmentation secondary to chronic venous insufficiency. ■ Protocol: no specific ST, 2.34 J/cm² with 3.3 mm spot size, 2173-4003 pulses, 3 treatments in 4-8 weeks intervals 	Hyperpigmentation

	PEER REVIEWED PUBLISHED STUDIES	APPLICATIONS
43.	<p>Treatment of flat and elevated pigmented disorders with a 755-nm alexandrite picosecond laser: clinical and histological evaluation <i>Alegre-Sanchez A, Jiménez-Gómez N, Moreno-Arrones O, Fonda-Pascual P, Pérez-García B, Jaén-Olasolo P, Boixeda P. Lasers Med Sci. Published online 9 February 2018.</i></p> <ul style="list-style-type: none"> ■ The 755nm alexandrite picosecond laser can be used for effective, fast, and safe treatment of flat and elevated pigmented disorders. ■ Protocol: ST I-IV (mostly II), 2-4 J/cm² with 2.5-3.5 mm spot size, 5-10 Hz, 1-5 treatments ■ Endpoint: mild blanching for pigmented lesions with most of the chromophore located in the dermis (i.e., nevus of Ota) and an intense blanching for those with superficial epidermal pigmentation (i.e., flat warts or epidermal nevus). 	Pigmented Lesions
44.	<p>Picosecond 755-nm Alexandrite Lasers Are an Effective Treatment for Imatinib-Induced Hyperpigmentation <i>Kok WL, Chua SH. American Society for Dermatologic Surgery. 2019;45(4):616-618. doi:10.1097/DSS.0000000000001868</i></p> <ul style="list-style-type: none"> ■ Picosecond 755-nm alexandrite lasers is a safe and effective tool that can be used in the management of IM-associated ADM. ■ Protocol: no specific ST, 2.33 J/cm² with 3 mm spot size, 550ps, 5 treatments in 8 weeks intervals 	Hyperpigmentation
45.	<p>Comparison of the Efficacy and Safety of a Picosecond Alexandrite Laser and a QSwitch Alexandrite Laser for the Treatment of Freckles in Chinese <i>Yin Yang, Lin Peng, Yiping Ge, Tong Lin. Journal of the American Academy of Dermatology. Published online 6 August 2018.</i></p> <ul style="list-style-type: none"> ■ The efficacy and safety of using picosecond Alexandrite laser treating freckles in Chinese patients is comparable to that of Q-switched Alexandrite laser but using a lower fluence. ■ Protocol: Chinese no specific ST, 4.4 J/cm² fluence used 	Freckles

	PEER REVIEWED PUBLISHED STUDIES	APPLICATIONS
46.	<p>Treatment of Laser-Responsive Dermal Pigmentary Conditions in Type III-IV Asian Skin With a 755-nm Picosecond Pulse Duration Laser: A Retrospective Review of Its Efficacy and Safety <i>Koh YP, Tan AWM, Chua SH. Dermatologic Surgery. February 2020:1. doi:10.1097/DSS.0000000000002332</i></p> <ul style="list-style-type: none"> ■ Pico 755nm laser is effective in the treatment of Nevi of Ota and Hori's nevi in Asians with ST III/IV, with minimal risk of postlaser complications. ■ Compared to past experience with the QS 1064-nm laser, Pico 755nm laser results in faster and more effective pigment clearance. ■ Protocol: ST III-IV, pretreatment topical anesthetic, air cooling, vibratory devices, and cold compressions during treatment, on NO group: 1.02-2.92 J/cm² with 2.8-5 mm spot size; on HN group: 1.67-2.83 J/cm² with 3-3.8mm spot size, 750ps, 5-10 Hz, 2 passes, 1-6 treatments in at least 8 weeks intervals ■ Endpoint: either mild erythema or mild surface whitening 	Pigmentary Disorders
47.	<p>Type 2 Minocycline-induced hyperpigmentation successfully treated with the novel 755 nm picosecond alexandrite laser – a case report <i>Katsumi Sasaki, Toshio Ohshiro, Takafumi Ohshiro, Reiko Sakio, Emi Fukazawa, Masahiro Toriumi, Tamotsu Ebihara. Laser Ther. 2017; 26(2): 137-144</i></p> <ul style="list-style-type: none"> ■ A single case study showed rapid clearance of the type 2 minocycline-induced hyperpigmentation after a single ps-Alex session on both limbs without PIH and the result maintained one-year post-treatment. ■ Protocol: ST IV, 6.37 J/cm² with 2 mm spot size, 750ps, 1 treatment ■ Endpoint: white change in the epidermis- frosted appearance ■ Post treatment care: application of a vitamin C lotion and a moisturizing gel 	Minocycline Induced Hyperpigmentation
48.	<p>Treatment of henna-induced Riehl's melanosis with a 755-nm picosecond alexandrite laser <i>Takanori Iwayama, Masahiro Oka, Takeshi Fukumoto. Lasers in Medical Science (2020) 35:1659–1661. https://doi.org/10.1007/s10103-020-03077-0</i></p> <ul style="list-style-type: none"> ■ PicoSure safely and effectively treated henna-induced Riehl's melanosis which is persisted from other treatment options such as tablets and ointments containing vitamin C, antihistamine tablets, tranexamic acid tablets, and hydroquinone ointments. ■ Protocol: ST IV, 0.25-0.71 J/cm² gradually increased in 7 treatments by 4 weeks intervals 	Henna-Induced Riehl's Melanosis

	PEER REVIEWED PUBLISHED STUDIES	APPLICATIONS
49.	<p>Treatment of gingival pigmentation with a 755-nm alexandrite picosecond laser <i>Cristina Pindado-Ortega, Adrián Alegre-Sánchez, Aitana Robledo-Sánchez, Ignacio Tormo-Alfaro & Pablo Boixeda. J Cosmet Laser Ther. 2019, 22:1, 39-41, DOI:10.1080/14764172.2019.1708951</i></p> <ul style="list-style-type: none"> ■ Anterior gingival areas were depigmented with satisfaction after 1-2 PicoSure treatments. ■ Protocol: no specific ST, 2.83 J/cm² with 3 mm spot size, 1-2 treatments in 4 weeks intervals ■ Endpoint: frosty ■ Post treatment care: twice-daily oral rinse with 0.12% chlorhexidine was prescribed. 	Gingival Pigment
50.	<p>Minocycline-induced hyperpigmentation: rapid resolution after 755nm alexandrite picosecond laser treatment <i>Jason K. Rivers, Misha Zarbafian, Brianne Vestvik, Sara Kawamura, Marcie Ulmer & L. Alexandra Kuritzky (2020) Journal of Cosmetic and Laser Therapy, 22:2, 96-99, DOI: 10.1080/14764172.2020.1740275</i></p> <ul style="list-style-type: none"> ■ 1 PicoSure treatment resulted in immediate and significant clearance of the minocycline-induced pigmentation in all treated areas. ■ Protocol: Caucasian no specific ST, pretreatment topical anesthetic, 2.08 J/cm² with 3.5 mm spot size, 2.5 Hz, 1 pass 	Minocycline Induced Hyperpigmentation
51.	<p>Treatment of segmental lichen aureus in the pediatric age with a 755 nm alexandrite picosecond laser. A new therapeutic approach for pigmented purpuric dermatosis <i>Fernandez-Nieto D, -Jimenez-Cauhe J, -Ortega-Quijano -Daniel, Pindado-Ortega C, Boixeda P. Treatment of segmental lichen aureus in the pediatric age with a 755 nm alexandrite picosecond laser. A new therapeutic approach for pigmented purpuric dermatosis. JDDG: Journal der Deutschen Dermatologischen Gesellschaft. 2020;18(10):1201-1203. doi:10.1111/ddg.14172</i></p> <ul style="list-style-type: none"> ■ Single patient (9 years old) treated four times ■ 75% clearance of pigment was achieved after four treatments, with no recurrence noted at the six month follow-up ■ Protocol: Topical mixture of 2.5% lidocaine and 2.5% prilocaine, 3.5 J/cm² with 4mm spot size, 4 treatments ■ Endpoint: immediate whitening ■ Pre treatment care ■ Post treatment care: twice daily topical fusidic acid for one week post each treatment 	Pigmented Purpuric Dermatitis

	PEER REVIEWED PUBLISHED STUDIES	APPLICATIONS
52.	<p>A Systematic Review of Picosecond Laser in Dermatology: Evidence and Recommendations</p> <p>Douglas C. Wu, Mitchel P. Goldman, Heidi Wat, Henry H.L. Chan. <i>Lasers in Surgery and Medicine</i>. 2020. DOI 10.1002/lsm.23244</p> <p>■ Picosecond laser is a safe and effective treatment modality for an increasing range of dermatologic indications.</p>	<p>Tattoos</p> <p>Pigmented Lesions</p> <p>Pigmentary Disorders</p> <p>Acne Scars</p> <p>Photoaging</p>
53.	<p>Picosecond Laser: Tattoos and Skin Rejuvenation</p> <p>Saluja R, Gentile RD. <i>Facial Plastic Surgery Clinics of North America</i>. 2020;28(1):87-100. doi:10.1016/j.fsc.2019.09.008</p> <p>■ PicoSure with the zoom handpiece and flat and FOCUS lens have contributed to safely treat tattoo, benign pigmentation, rhytides, acne scarring and other off-face applications in both lighter and darker Fitzpatrick skin type individuals.</p>	<p>Tattoos</p> <p>Skin Revitalization</p>
54.	<p>Short-pulsed laser for the treatment of tattoos, pigmented lesions, scars and rejuvenation</p> <p>Tanghetti EA, Hoffmann KA, Hoffmann K. <i>Seminars in Cutaneous Medicine and Surgery</i>. 2017;36(4):148-154. doi:10.12788/j.sder.2017.032</p> <p>■ The picosecond lasers have delivered enhanced efficacy for the treatment of tattoos, pigmented lesions, also opened a new method of rejuvenation for photodamaged skin and the treatment of scars even for darker skin types.</p>	<p>Tattoos</p> <p>Pigmented Lesions</p> <p>Acne Scars</p> <p>Skin Revitalization</p>
55.	<p>Evolution of the Picosecond Laser: A Review of Literature</p> <p>Torbeck RL, Schilling L, Khorasani H, Dover JS, Arndt KA, Saedi N. <i>Journal of the American Society for Dermatologic Surgery</i>. 2019;45(2):183-194. doi:10.1097/DSS.0000000000001697</p> <p>■ The increasingly positive results and low incidence of adverse effects further substantiates PS efficacy for a variety of dermatologic uses.</p>	<p>Tattoos</p> <p>Pigmented Lesions</p> <p>Pigmentary Disorders</p> <p>Acne Scars</p> <p>Photoaging</p>
56.	<p>Lasers in Tattoo and Pigmentation Control: Role of the PicoSure Laser System</p> <p>Torbeck R., Bankowski, R., Henize S., Saedi N. <i>Medical Devices: Evidence and Research</i>. 2016;9:63-67.</p> <p>■ Review article strengthens the clinical value of picosecond vs nanosecond</p> <p>■ PicoSure evidence strongly demonstrates treatment safety & efficiency</p>	<p>Tattoos</p> <p>Pigmented Lesions</p>

	PEER REVIEWED PUBLISHED STUDIES	APPLICATIONS
57.	<p>Successful treatment of a traumatic tattoo in a pediatric patient using a 755-nm picosecond laser <i>Jeon H, Geronemus RG. Pediatric Dermatology. 2018;35(6):e430-e431. doi:10.1111/pde.13668</i></p> <ul style="list-style-type: none"> ■ A single treatment of a green traumatic tattoo on the left infraorbital region with an alexandrite picosecond laser resulted in a complete clearance without any side effects. ■ Protocol: no specific ST, pretreatment topical anesthetic + local infiltration, 2.3 J/cm², 3.0 mm spot size, 2.5 Hz, 750 ps, 1 treatment ■ Endpoint: whitening ■ Post treatment care: application of a petrolatum-based ointment twice a day to the treatment area. 	Traumatic Tattoos
58.	<p>Successful and Rapid Treatment of Blue and Green Tattoo Pigment With a Novel Picosecond Laser <i>Brauer JA, Reddy KK, Anolik R, Weiss ET, Karen JK, Hale EK, Brightman LA, Bernstein L, Geronemus, RG. Arch Dermatol. 2012;148(7):820-823.</i></p> <ul style="list-style-type: none"> ■ >75% clearance of blue/green inks after only 2 treatments without harming skin ■ In contrast, QS/nanosecond lasers can take up to 10 or 20 treatments ■ Protocol: ST II-IV, pretreatment lidocaine injection + topical anesthetic, 2.0-2.83 J/cm², 3.0-3.6 mm spot size, 5 Hz, z1-2 treatments ■ Endpoint: immediate epidermal whitening 	Tattoo: Blue and Green Ink
59.	<p>Treatment of Tattoos With a Picosecond Alexandrite Laser: A Prospective Trial <i>Saedi N, Metelitsa A, Petrell K, Arndt KA, Dover JS. Arch Dermatol. 2012;148(12):1360-1363.</i></p> <ul style="list-style-type: none"> ■ >75% clearance of black inks after 4 treatments with few transient side effects ■ Pico 755nm appears to reduce treatments by up to 50% vs historical QS controls ■ Protocol: ST I-V (mostly II-III), pretreatment topical or injectable anesthetic, 2.1-4.1 J/cm² with 2.5-3.5 mm spot size, 5 Hz, 1 pass, 2-10 treatments in 6±2 weeks intervals ■ Endpoint: immediate epidermal whitening 	Tattoos

	PEER REVIEWED PUBLISHED STUDIES	APPLICATIONS
60.	<p>Picosecond Lasers: the Next Generation of Short-pulsed Lasers <i>Freedman JR, Kaufman J, Metelitsa AI, Green JB. Seminars in Cutaneous Medicine and Surgery. Vol. 33, December 2014.</i></p> <ul style="list-style-type: none"> ■ Review article including PicoSure 755/532nm and Focus ■ Favorable summary of the technical/clinical advantages vs QS/nano 	Tattoos
61.	<p>Clearance of Yellow Tattoo Ink With a Novel 532-nm Picosecond Laser <i>Alabdulrazzaq H, Brauer JA, Bae YS, Geronemus RG. Lasers in Surgery and Medicine. 2015; Lasers in Surgery and Medicine 47:285–288.</i></p> <ul style="list-style-type: none"> ■ >75% yellow ink clearance in 2-4 treatments without harming the skin ■ Improved clearance rate using 532nm pico with safety and efficacy ■ Protocol: 532nm, ST II-III, pretreatment topical or injectable anesthetic, 1.1-1.4J/cm² with 2.5-3.3 mm spot size, 450-500 ps, 5 Hz, 1 pass, 1-5 treatments in 6-8 weeks intervals ■ Post treatment care: covered with Aquaphor, non-adhesive dressing and tape after treatment completion. 	Tattoos Yellow Ink
62.	<p>Safety and effectiveness of black tattoo clearance in a pig model after a single treatment with a novel 758 nm 500 picosecond laser: A pilot study <i>Izikson, L., Farinelli, W, Sakamoto, F., Tannous, Z. and Anderson, R.R. (2010) Lasers Surg. Med., 42: 640-646. doi:10.1002/lsm.20942</i></p> <ul style="list-style-type: none"> ■ The picosecond laser is more effective at carbon tattoo clearance after one session in a porcine model than the 30–50 nanosecond laser emitting at a similar wavelength. 	Tattoos Black Ink Pig model
63.	<p>Successful treatment of paradoxical darkening <i>Bae YC, Alabdulrazzaq H, Brauer J, Geronemus R. Lasers in Surgery and Medicine. 2016;48(5):471-473. doi:10.1002/lsm.22482</i></p> <ul style="list-style-type: none"> ■ The use of a picosecond 532nm and 1,064 nm laser improved paradoxical darkening in red colored tattoos. ■ Protocol: Caucasian no specific ST, subcutaneous lidocaine 1% with epinephrine 1:100,000 prior to treatment, 532nm, 0.3-1.2 J/cm² with 2.5-4 mm spot size on untreated tattoo; 532nm, 0.4-1.4 J/cm² with 2.7-4.5 mm spot size and 1064nm 1.4-1.7 J/cm² with 3.5-4mm spot size on paradoxical darkening tattoos. 	Paradoxical Darkening

	PEER REVIEWED PUBLISHED STUDIES	APPLICATIONS
64.	<p>New and advanced picosecond lasers for tattoo removal <i>Adatto MA, Amir R, Bhawalkar J, et al. Diagnosis and Therapy of Tattoo Complications. 2017;113-123. doi:10.1159/000450812</i></p> <ul style="list-style-type: none"> Initial studies demonstrated that picosecond pulses were more effective than nanosecond pulses in clearing black tattoos. 	Tattoos
65.	<p>Comparison of treatment with an alexandrite picosecond laser and Nd:YAG nanosecond laser for removing blue-black Chinese eyeliner tattoos <i>Zhang M, Huang Y, Lin T, Wu Q. Journal of Cosmetic and Laser Therapy. 2018;20:415-418. doi:10.1080/14764172.2018.1444773</i></p> <ul style="list-style-type: none"> For treatment of over 10 years blue-black eyeliner tattoos removal in Chinese, Alexandrite picosecond laser provide same clearance with the Nd:YAG nanosecond laser. Protocol: ST III-IV, 1.96-6.37 J/cm² with 2.0-3.6 mm spot size, 750ps, 1-4 treatments in 4-8 weeks intervals, mostly 1 treatment Endpoint: epidermal whitening and minimal pinpoint bleeding Post treatment care: application of a topical antibiotic ointment twice for 1 week 	Tattoos
66.	<p>Effects of picosecond laser on the mulit-coloured tattoo removal using Hartley guinea pig: A preliminary study <i>Choi MS, Seo HS, Kim JG, Choe SJ, Park BC, Kim MH, et al. (2018) PLoS ONE 13(9): e0203370. https://doi.org/10.1371/journal.pone.0203370</i></p> <ul style="list-style-type: none"> Picosecond lasers are more effective and safer than nanosecond lasers. 	Tattoos Hartley Guinea Pig Model
67.	<p>Safety of a perfluorodecalin-infused silicone patch in picosecond laser-assisted tattoo removal: A retrospective review <i>Feng H, Geronemus RG, Brauer JA. Dermatologic Surgery. 2019;45(4):618-621. doi:10.1097/DSS.0000000000001522</i></p> <ul style="list-style-type: none"> Single or multiple passes of the 755-nm and 532-nm picosecond lasers may be safely used in combination with PFD patch to treat black or multicolor tattoos on different body sites in patients of diverse skin types without post-treatment dyspigmentation. Protocol: ST I-V, pretreatment topical anesthetic + PFD-infused patch, 2-6.37 J/cm² with 1.5-4 mm spot size for 755nm, 1.12 J/cm² with 1.5-2 mm spot size for 532nm, 1-4 passes, 2-5 treatments Post treatment care: Some patients were instructed to apply a topical mid-potency corticosteroid twice daily for 3 days after treatment. 	Tattoos

	PEER REVIEWED PUBLISHED STUDIES	APPLICATIONS
68.	<p>Analysis of Incidence of Bulla Formation After Tattoo Treatment Using the Combination of the Picosecond Alexandrite Laser and Fractionated CO₂ Ablation <i>Au S, Liolios AM, Goldman MP. Dermatologic Surgery. 2015;41(2). doi:10.1097/DSS.0000000000000244</i></p> <ul style="list-style-type: none"> ■ A significant decrease in bulla formation associated with tattoo treatment when fractionated CO₂ ablation is added to the picosecond Alexandrite laser. ■ Protocol: no specific ST, intralesional lidocaine anesthetic, mean 3.09-3.37 J/cm² with 2.94-2.95 mm spot size on Pico alone, mean 2.67 J/cm² with 3.31 mm spot size on the Pico+CO₂ combination 	Tattoos
69.	<p>Therapeutic update: using lasers for tattoo removal <i>Sarnoff DS. Journal of drugs in dermatology : JDD. 2014;13(2):108-109.</i></p> <ul style="list-style-type: none"> ■ Picosecond 755 laser provides effective treatment utilizing lower fluencies thereby resulting in less thermal damage to surrounding skin and less risk of scarring. ■ >75% clearance of darkly pigmented tattoos after 4 treatments with few transient side effects. 	Tattoos
70.	<p>Picosecond Laser Treatment for Tattoos and Benign Cutaneous Pigmented Lesions (Secondary Publication) <i>Kenichiro Kasai. Laser Ther. 2017; 26(4): 274-281</i></p> <ul style="list-style-type: none"> ■ Picosecond laser is more than twice as effective in the removal of black pigmented tattoos and is several times more effective in removal of multi-colored tattoos, compared to QS lasers. 	Tattoos
71.	<p>Successful Treatment of Cosmetic Oral Mucosal Tattoos Using QS 694-nm Ruby Laser and 755-nm Alexandrite Picosecond Laser <i>Hao Feng, Mitalee P. Christman, Sonal Muzumdar, Roy G. Geronemus. Lasers Surg Med. 2019; DOI 10.1002/lsm.23207</i></p> <ul style="list-style-type: none"> ■ PicoSure treatment demonstrated marked improvement for the removal of unwanted cosmetic mucosal tattoos without scarring or dyspigmentation. ■ Protocol: ST IV, pretreatment local infiltration anesthetic, 3.36 J/cm² with 2.5 mm spot size, 500ps, 1 treatment ■ Endpoint: whitening 	Oral Mucosa Tattoos

	PEER REVIEWED PUBLISHED STUDIES	APPLICATIONS
72.	<p>Comparative Evaluation of 15 Laser and Perfluorodecalin Combinations for Tattoo Removal Curtis L. Hardy, Ramya Kollipara, Erika Hoss, Mitchel P. Goldman. <i>Lasers Surg Med.</i> 2019; DOI 10.1002/Ism.23197</p> <ul style="list-style-type: none"> In this single case study, the combination of picosecond 1064 nm, picosecond 755 nm, and a fractionated CO₂ laser without the PFD patch showed superior clinical improvement over the other combinations. Protocol: no specific ST, 2.83 J/cm² with 3 mm spot size, 750 ps, 2 treatments in 4 weeks intervals Endpoint: immediate frosting without bleeding 	Wavelength Combination with PFD Tattoo
73.	<p>Sound levels and safety in cosmetic laser surgery Callaghan DJ, Bonati LM, Alam M, Jerdan K, Taylor MB, Dover JS. <i>Lasers in Surgery and Medicine.</i> 2019;51(6):491-494. doi:10.1002/Ism.23062</p> <ul style="list-style-type: none"> 755nm Picosecond laser with an average maximum of 93.6 dBA that remain safe. 	Safety
74.	<p>Expanding the Applications of Picosecond Lasers Almukhtar R, Ortego J, Lee B, Hooper D. <i>Dermatol & Cosmet JOJ.</i> 2018; 1(2):555557.</p> <ul style="list-style-type: none"> The 755nm alexandrite picosecond laser can be used for effective and safe treatment of pigmented lesions, acne scarring, photodamage, and wrinkling 	Picoseconds vs. Nanosecond

	RECAPS OF ABSTRACT PRESENTATIONS AT ASLMS 2020	APPLICATIONS
1.	<p>Evaluation Of The Sequential Use Of A Picosecond Pulsed 755Nm Alexandrite Laser And Hyaluronic Acid-Based Injectable Fillers Chiu, Jeremy Brauer</p> <ul style="list-style-type: none"> The sequential use of injectable fillers and a picosecond pulsed alexandrite laser with a diffractive lens is both safe and effective method for treating patients in need of both volume and textural improvements. 	Skin Revitalization
2.	<p>Safety And Efficacy Of Picosecond Alexandrite Laser For Treatment Of Active Acne Vulgaris In Asians Kentaro Oku</p> <ul style="list-style-type: none"> Treatment of active acne vulgaris using picosecond 755nm alexandrite laser is safe and efficacious in Asians. 	Acne Vulgaris

	RECAPS OF ABSTRACT PRESENTATIONS AT ASLMS 2020	APPLICATIONS
3.	<p>Sequential use of an advanced 300W radiofrequency system and picosecond pulsed 755nm alexandrite laser for revitalization of neck tissue.</p> <p><i>Emil Tanghetti, MD</i></p> <ul style="list-style-type: none"> The sequential use of a picosecond alexandrite laser in concert with an advanced 300W RF device is both safe and effective for the treatment of wrinkles in the neck. 	Neck Laxity
4.	<p>Treatment For Infraorbital Dark Circles Using Picosecond Alexandrite Laser With Diffractive Lens Array In Asians</p> <p><i>Carl Kuo Liang Cheng Haute Beaute Skin & Vein Clinic, Taipei City, Taiwan, Republic of China</i></p> <ul style="list-style-type: none"> A picosecond 755nm laser with diffractive lens array can serve as a safe and effective treatment option for pigmentary type dark circle in Asians 	Infraorbital Dark Circles

	RECAPS OF ABSTRACT PRESENTATIONS AT ASLMS 2019	APPLICATIONS
5.	<p>Comparison Of Picosecond And Nanosecond Laser Treatment For Tattoo Removal In Chinese</p> <p><i>Yu Han Dr. Su's Clinic, Beijing, China</i></p> <ul style="list-style-type: none"> Our results show that the picosecond laser is more effective than the nanosecond laser in tattoo removal, and has less adverse effects 	Tattoos

	RECAPS OF ABSTRACT PRESENTATIONS AT ASLMS 2018	APPLICATIONS
6.	<p>A Randomized Split-Face Clinical Trial Comparing 1550nm Erbium-Doped Fractional Laser and 755nm Alexandrite Picosecond Pulse Duration Laser with Diffractive Lens Array in the Treatment of Atrophic Acne Scars</p> <p><i>Karavan M, Summers EM, Tristani P, Taylor MB, Smart D.</i></p> <ul style="list-style-type: none"> Alexandrite picosecond laser could be used as an equally efficacious treatment of atrophic acne scars with statistically significant fewer side effects and lower pain as compared to fractional laser. 	Acne Scars

	RECAPS OF ABSTRACT PRESENTATIONS AT ASLMS 2018	APPLICATIONS
7.	<p>Efficacy And Safety Of Picosecond 755nm Alexandrite Laser For Treatment Of Melasma In Asians - A Retrospective Study</p> <p><i>Mei-Ching Lee Chang Gung Clinic, Taipei, Taiwan</i></p> <ul style="list-style-type: none"> No abstract available for oral presentation https://www.aslms.org/annual-conference-2019/learn/program-at-a-glance/clinical-applications-multi-specialty-saturday 	Acne Scars
8.	<p>A Randomized Controlled Trial Of Picosecond Alexandrite Laser With A Diffractive Lens Array Compared To Triple Combination Cream For Melasma In Asians</p> <p><i>Chang Cheng Chang China Medical University Hospital, Taichung, Taiwan</i></p> <ul style="list-style-type: none"> The results show that picosecond alexandrite laser with a diffractive lens array can achieve comparable efficacy for treating melasma in Asian compared to triple combination cream 	Melasma
9.	<p>Enhanced Treatment of Melasma with Combined Surface and Diffractive Lens Optics</p> <p><i>Margaret A. Weiss, MD1, Robert A. Weiss, MD</i></p> <ul style="list-style-type: none"> Dual passes with Pico 755 Flat optic and Focus show significant improvement on melasma 	Melasma
10.	<p>Successful and Safe Results in the Treatment of Combined Lesions of Melasma with Blemishes Using Combination Treatment of Q-Switched 1064nm Nd:YAG Laser and 755nm Picosecond Laser</p> <p><i>Joonhong Park, MD</i></p> <ul style="list-style-type: none"> Melasma and blemishes in Asian can be safely improved by combining PicoSure 755nm and Q-Switched 1064nm laser 	Melasma
11.	<p>Evaluation of the Safety and Efficacy of the Picosecond Alexandrite Laser with Specialized Focus Lens Array for Treatment of the Melasma in Asia Patients</p> <p><i>Chang-Cheng Chang, MD, Yu-Tsung Chen, MD, Bor-Shyl Lin, MD, Hsiu-Mei Chiang, MD, Yung-Hsueh Huang, MD</i></p> <ul style="list-style-type: none"> PicoSure 755 Focus treatments demonstrated improved melasma management in Asian in only 2 treatments without obvious side effects 	Melasma

	RECAPS OF ABSTRACT PRESENTATIONS AT ASLMS 2018	APPLICATIONS
12.	<p>Treatment Of Refractory Melasma In Asians With Flat And Diffractive Lens Picosecond Alexandrite Laser</p> <p><i>Emil A. Tanghtetti Center for Dermatology & Laser Surgery, Sacramento, CA</i></p> <p>■ This investigation highlights the utility of a picosecond Alexandrite with a flat and diffractive lens array to successfully treat a large percentage of Asian patients in a sunny climate.</p>	Melasma
13.	<p>A Retrospective Study On The Efficacy And Safety Of Picosecond Alexandrite Laser In The Treatment Of Acquired Bilateral Nevus Of Ota-Like Macules In Chinese</p> <p><i>Tong Lin Institute of Dermatology, Chinese Academy of Medical Sciences, Nanjing, Jiangsu, China</i></p> <p>■ Our results suggested that picosecond alexandrite laser is an effective and safe treatment approach for acquired bilateral nevus of Ota-like macules in Chinese patients.</p>	Hori's Nevus
14.	<p>Clinical Evaluation of a 1064-nm Picosecond Laser for Removal of Black Tattoos in Patients with Dark Skin Types</p> <p><i>Hana Jeon, MD, Daniel A. Belkin, MD, Georgina M. Ferzli, MD, Roy G. Geronemus, MD</i></p> <p>■ PicoSure 1064nm picosecond laser is a safe and effective treatment for black tattoo removal in ST V-VI with minimal anesthesia and post treatment requirements.</p>	Tattoos

	RECAPS OF ABSTRACT PRESENTATIONS AT ASLMS 2017	APPLICATIONS
15.	<p>Clinical Study with a Picosecond Alexandrite Laser and a Diffractive Optic for Photo-Rejuvenation and Pigment Reduction in Skin Types II-IV During the Summer Months in a Sun Rich Environment</p> <p><i>Emil Tanghtetti, MD</i></p> <p>■ PicoSure Focus can improve photodamage consistently in fine lines, abnormal pigmentation, tone and texture in ST II-IV</p>	Skin Revitalization
16.	<p>Using Standard and High Pulse Coverage with Picosecond Laser Treatment of Wrinkles and Acne Scarring: Long Term Clinical Observations</p> <p><i>Dierickx C. Annual Meeting April 7-8, 2017. Lasers Surg Med 2017; S24, p 13.</i></p> <p>■ No additional benefit in using more than average number (5000-6000) of pulses in Focus treatments on face for ST I-IV</p>	Wrinkles Acne Scars

	RECAPS OF ABSTRACT PRESENTATIONS AT ASLMS 2017	APPLICATIONS
17.	<p>A Pilot Study of the Combined Use of 755nm Alexandrite Picosecond Laser and Intradermal Air Dissector in the Treatment of Atrophic Acne Scars in Asian Patients</p> <p><i>Belo V, Capiz G, Villanueva M. Annual Meeting April 7-8, 2017. Lasers Surg Med 2017; S63, p 22.</i></p> <p>■ Acne scarring can be significantly improved by combining 755 and intradermal air dissector, with a wide safety margin for Asian skin</p>	Acne Scars
18.	<p>Safety and Efficacy of 755nm Alexandrite Picosecond Laser (PicoSure) for the Treatment of Acne Scars in Asians</p> <p><i>Belo V, Cesa A, San Luis N, Capiz G. Annual Meeting April 7-8, 2017. Lasers Surg Med 2017; E72.</i></p> <p>■ 755nm/Focus safe & effective at treating acne scars in Asian skin</p>	Acne Scars
19.	<p>Safety and Efficacy of a Picosecond 755nm Wavelength Alexandrite Laser with Focus Lens Array for the Treatment of Neck Laxity</p> <p><i>Hana Jeon, MD1, Daniel Belkin, MD1, Roy Geronemus, MD</i></p> <p>■ PicoSure 755nm with Focus can serve as a safe nonsurgical treatment option for neck rejuvenation with minimal to no downtime</p>	Neck Laxity
20.	<p>A Randomized, Double-Blind, Study Evaluating a 755nm Picosecond Pulsed Alexandrite Laser vs. a Non-Ablative 1927nm Fractionated Thulium Laser for the Treatment of Facial Photopigmentation and Aging</p> <p><i>Sadick N. Annual Meeting April 7-8, 2017. Lasers Surg Med 2017; S39, p 14.</i></p> <p>■ 4 treatments of PicoSure Focus shown to produce better quality results vs 2 treatments of Fraxel, and PicoSure treatments caused significantly less pain & downtime</p>	Pigmented Lesions Wrinkles Acne Scars
21.	<p>Results of the 755nm Picosecond Laser with Diffractive Lens Array: A European Perspective of Skin Revitalization on Normal Skin and of a Post-Lyell Patient</p> <p><i>Adatto, M. Annual Meeting April 7-8, 2017. Lasers Surg Med 2017; E71.</i></p> <p>■ PicoSure patient satisfaction extremely high and patients likely to continue maintenance treatments, Lyell patient also highly satisfied with no adverse effects</p>	Pigmented Lesions Wrinkles Acne Scars

	RECAPS OF ABSTRACT PRESENTATIONS AT ASLMS 2017	APPLICATIONS
22.	<p>Long Term Outcomes for Wrinkles and Photoaging Treated with a Novel Picosecond 755nm Laser Delivered with a Diffractive Lens Array Halvorson C, Weiss M, Beasley K, Weiss R. Annual Meeting April 7-8, 2017. Lasers Surg Med 2017; E.</p> <p>■ 755 & Focus safe & effective at treating pigmentation, reducing superficial wrinkles, and improving topological unevenness</p>	Pigmented Lesions Wrinkles
23.	<p>A Comparative Study with a Picosecond Alexandrite with a Diffractive Lens Array or a Flat Optic in Dark Asian Patients in a Sunny Environment Eniwat Polnikorn, MD, Emil Tanghetti, MD</p> <p>■ PicoSure Focus in a slow, measured approach successfully treated a significant number of dark skinned Asian with melasma in a sunny climate</p>	Melasma
24.	<p>Retrospective Study of Safety and Efficacy of Picosecond Alexandrite 755nm Laser for the Treatment of Melasma in Chinese Yu Han, MD1, Xin Guan, MD, Mingshan Su, MD</p> <p>■ PicoSure 755 Flat optic and Focus combined treatments demonstrated improved melasma management in Chinese with a low rebound rate</p>	Melasma
25.	<p>Safety and Efficacy of the 755nm Picosecond Laser with Diffractive Lens for the Treatment of Facial Melasma in Chinese Shek S, Yeung C, Kung KY, Chung M MH, Kono T, Chan H HL. Annual Meeting April 7-8, 2017. Lasers Surg Med 2017; S74, p 26.</p> <p>■ PicoSure 755 Focus treatments demonstrated improved melasma management</p>	Melasma
26.	<p>Novel Approach to Melasma Using Two Simultaneous Methods of Picosecond Delivery Mahoney A, Weiss R, McDaniel D, Halvorson C. Annual Meeting April 7-8, 2017. Lasers Surg Med 2017; E.</p> <p>■ 755 Flat & Focus safe & effective treatment for melasma management</p>	Melasma
27.	<p>Treatment of a Nevus of Ota in a Caucasian Patient with a Picosecond 755nm Alexandrite Laser Callaghan D, Konnikov N. Annual Meeting April 7-8, 2017. Lasers Surg Med 2017; E97.</p> <p>■ PicoSure safe & effective at treating nevus of Ota in caucasian skin</p>	Pigmented Lesions

	RECAPS OF ABSTRACT PRESENTATIONS AT ASLMS 2017	APPLICATIONS
28.	<p>Retrospective Study of Picosecond Alexandrite 755nm Laser for Nevus of Ota Treatment in Chinese Tong Lin, MD, PhD1, Lin Peng, MD, Yin Yang, MD1, Yiping Ge, MD.</p> <p>■ PicoSure 755nm is an effective and safe treatment approach for nevus of Ota in Chinese ST III-IV with 1-5 treatments</p>	Pigmented Lesions
29.	<p>Evaluation of 755nm Picosecond Alexandrite Laser for Nevus of Ota in Chinese Lin T, Peng L, Ge Y, Zeng R, Zhang M, Yang Y, Wu Q, Guo L, Wu Y. Annual Meeting April 7-8, 2017. Lasers Surg Med 2017; E104.</p> <p>■ 755 safe & effective at treating nevus of Ota in Chinese</p>	Pigmented Lesions
30.	<p>Clinical Evaluation of a Picosecond Laser for the Treatment of Solar Lentigines Jeon H, Belkin D, Pettersen Neckman J, Bloom B, Brauer J, Geronemus R. Annual Meeting April 7-8, 2017. Lasers Surg Med 2017; S70, p 25.</p> <p>■ PicoSure 532 safe & effective at treating solar lentigines in ST I-III</p>	Pigmented Lesions
31.	<p>Comparison Study of a 755nm Picosecond Laser vs a 755nm Nanosecond Laser in the Treatment of Dermal Melanosis Kono T, Chan H HL, Groff W, Kotaro I, Akamatsu T. Annual Meeting April 7-8, 2017. Lasers Surg Med 2017; S71, p 25.</p> <p>■ PicoSure 755 safe & effective at treating dermal pigmented lesions and shown to be more effective than older nanosecond 755 device</p>	Pigmented Lesions
32.	<p>Prospective, Split-Face, Evaluator-Blinded Study of Picosecond Alexandrite 755nm Laser vs Q-Switched Alexandrite 755nm Laser on Freckles in Chinese Ge Y, Guo L, Wu Q, Wu Y, Zhang M, Zeng R, Lin T. Annual Meeting April 7-8, 2017. Lasers Surg Med 2017; S73, p 26.</p> <p>■ Pico 755 clears freckles with less downtime/energy vs nano 755</p>	Freckles
33.	<p>Prospective, Split-Face, Evaluator-Blinded Study of Picosecond Alexandrite 755nm Laser vs Q-Switched Alexandrite 755nm Laser on Freckles in Chinese Ge Y, Guo L, Wu Q, Wu Y, Zhang M, Zeng R, Lin T. Annual Meeting April 7-8, 2017. Lasers Surg Med 2017; S73, p 26.</p> <p>■ Pico 755 clears freckles with less downtime/energy vs nano 755</p>	Freckles

	RECAPS OF ABSTRACT PRESENTATIONS AT ASLMS 2017	APPLICATIONS
34.	<p>Split Tattoo Comparison of Two Picosecond Laser with Different Wavelengths for Tattoo Removal Hoffmann Kr, Hoffmann Kl. Annual Meeting April 7-8, 2017. Lasers Surg Med 2017; E100.</p> <p>■ PicoSure 755/532 is equivalent to pico 1064/532 in tattoo removal with 755 having an advantage in green and blue inks</p>	Tattoos
35.	<p>The Comparative Cutaneous and Histological Changes of Skin Types I-VI Over 24 Hours with Fractional Picosecond 532nm, 1064nm, and 755nm Tanghetti E, Jennings J. Annual Meeting April 7-8, 2017. Lasers Surg Med 2017; S37, p 14.</p> <p>■ PicoSure 755nm consistently demonstrated minimal erythema and intra- epidermal LIOBs while Pico 1064/532nm demonstrated prolonged erythema commonly associated with dermal hemorrhage</p>	Clinical Histology

	RECAPS OF ABSTRACT PRESENTATIONS AT ASLMS 2016	APPLICATIONS
36.	<p>Cutaneous Histologies Seen with Fractional Picosecond 532nm, 1064nm, 755nm and Correlation with Laser Interaction Modeling of the Absorbing Chromophores Tanghetti E, Jennings J. Annual Meeting April 7-8, 2017. Lasers Surg Med 2017; E82.</p> <p>■ 755nm/Focus safe & effective which has been observed clinically</p> <p>■ 755nm 'melanin to blood absorption ratio' (vs 1064/532) is an important 3X advantage that leads to skin revitalization with minimal downtime</p>	Clinical Histology/ Modeling
37.	<p>Treatment of Neck Laxity Using a Picosecond 755nm Alexandrite Laser Zhuang A, Kilmer S. Annual Meeting April 1-2, 2016. Lasers Surg Med 2016; S45, p 16.</p> <p>■ 755nm/Focus can be effective at improving tone and revitalization of neck</p>	Wrinkles Neck Laxity
38.	<p>Pilot Study of 755nm Alexandrite Picosecond Laser for the Treatment Striae Distensae: a Clinical and Histopathological Study in Asian Patients Belo V, Santos-Capiz G, Villaneuva M. Annual Meeting April 1-2, 2016. Lasers Surg Med 2016; S46, p 17.</p> <p>■ 755nm/Focus treatments improved the appearance of striae distensae in Asians</p>	Striae

	RECAPS OF ABSTRACT PRESENTATIONS AT ASLMS 2016	APPLICATIONS
39.	<p>Picosecond Laser for Facial rejuvenation Using a Compressed Treatment Interval</p> <p><i>Dover J, Arndt K, Khetarpal S, Prather H, Desai S, Kruter L, Depina J, Petrell K. Annual Meeting April 1-2, 2016. Lasers Surg Med 2016; S44, p 16.</i></p> <p>■ 755nm/Focus is safe & effective when administered in 2-3 week intervals</p>	<p>Pigmented Lesions</p> <p>Wrinkles</p> <p>Acne Scars</p>
40.	<p>Treatment of Melasma Via a Novel Alexandrite Picosecond Laser Regimen Using Both the Diffractive Lens Array and Standard Optics</p> <p><i>Weiss R, McDaniel D, Weiss M, et al. Annual Meeting April 1-2, 2016. Lasers Surg Med 2016; E69, p 30.</i></p> <p>■ 755nm/Focus/Flat is safe & effective treatment for managing Melasma</p>	<p>Melasma</p>
41.	<p>Treatment of Medication Induced Pigmentation with a 755nm Picosecond Laser</p> <p><i>Hoffmann K. Annual Meeting April 1-2, 2016. Lasers Surg Med 2016; E19, p 8.</i></p> <p>■ 755nm Flat optic treatments effectively cleared drug-induced pigmentation</p>	<p>Pigmentation</p>
42.	<p>Safety and Efficacy of Picosecond Alexandrite Laser on the Treatment of Mixed Melasma on Asian Patients</p> <p><i>Belo V, Munoz JC, Sison De-Leon JR. Annual Meeting April 1-2, 2016. Lasers Surg Med 2016; S42, p 15.</i></p> <p>■ 755nm/Focus is safe and effective for managing Asian/OUS Melasma</p>	<p>Melasma</p>
43.	<p>755nm Picosecond Laser for Skin Rejuvenation in Chinese</p> <p><i>Shek SY, Yeung CK, Chan JC, Chan HH. Annual Meeting April 1-2, 2016. Lasers Surg Med 2016; S43, p 16.</i></p> <p>■ 755nm Pico/Focus/Flat is safe & effective in Chinese skin</p>	<p>Melasma</p>
44.	<p>A Prospective Split-Face Study of the Picosecond Alexandrite Laser with Specialized Lens Array for Facial Photoaging in Chinese</p> <p><i>Lin T, Ge Y, Guo L, Zeng R. Annual Meeting April 1-2, 2016. Lasers Surg Med 2016; LB8, p 4.</i></p> <p>■ 755nm/Focus is safe & effective treatment for facial photoaging in Chinese skin</p>	<p>Pigmented Lesions</p>

	RECAPS OF ABSTRACT PRESENTATIONS AT ASLMS 2016	APPLICATIONS
45.	<p>A 1064nm, 532nm and 755nm Laser System for the Treatment of Unwanted Tattoos</p> <p><i>Bloom B, Alabdulrazzaq H, Bae YS, Brauer JA, Neckman J, Bernstein L, Weiss E, Anolik R, Geronemus, RG. Annual Meeting April 1-2, 2016. Lasers Surg Med 2016; S37, p 13.</i></p> <ul style="list-style-type: none"> ■ 3-WL Pico: 755/532 maximum effectiveness for all colors including black ■ 1064 and 755 equally effective in black ink, 1064 preferred in ST V-VI 	Tattoos
46.	<p>Unwanted Periorbital Tattoos Safely and Effectively Treated with Picosecond 755nm Alexandrite Laser</p> <p><i>Neckman J, Brauer JA, Geroneums RG. Annual Meeting April 1-2, 2016. Lasers Surg Med 2016; S41, p 15.</i></p> <ul style="list-style-type: none"> ■ 755nm safely and effectively clears periorbital (cosmetic) tattoos 	Tattoos

	RECAPS OF ABSTRACT PRESENTATIONS AT ASLMS 2015	APPLICATIONS
47.	<p>The Immediate Clinical and Thermal Findings Associated with the Use of a Picosecond Alexandrite Laser with a Flat and a Fractional Optic</p> <p><i>Tanghetti E, Knox A, Hamann C. Annual Meeting April 1-2, 2016. Lasers Surg Med 2016; S47, p 17.</i></p> <ul style="list-style-type: none"> ■ Focus led to higher temperature (vs Flat) due to enhanced inflammation 	Clinical Study
48.	<p>Comparative Cutaneous Histology from the Treatment Using a Picosecond Alexandrite and Nd:YAG Laser with a Fractional Optic</p> <p><i>Tanghetti E. Annual Meeting April 1-2, 2016. Lasers Surg Med 2016; LB6, p 3.</i></p> <ul style="list-style-type: none"> ■ 3-WLs tested with (Flat & Focus): 755 performed best on all skin types ■ Conveys the side effect profile; supports 755 > 1064 > 532 for safe skin treatments 	Clinical Histology
49.	<p>Interesting Variety of Clinical Observations with Picosecond Laser Technology</p> <p><i>Dierickx C. Annual Meeting April 1-2, 2016. Lasers Surg Med 2016; S48, p 17.</i></p> <ul style="list-style-type: none"> ■ 755nm/Focus is effective treatment for Melasma, pigment, and skin rejuvenation 	Clinical Assessment

	RECAPS OF ABSTRACT PRESENTATIONS AT ASLMS 2015	APPLICATIONS
50.	<p>Picosecond Laser For Reduction of Wrinkles: Long Term Results Weiss M, Weiss R, Lorden F, Trageser M, Beasley K. Annual Meeting April 24-25, 2015. <i>Lasers Surg Med</i> 2015; S68, p 24.</p> <p>■ 755nm/Focus shows reduced appearance of wrinkles over longer term</p>	Wrinkles
51.	<p>Characterization of the Histologic Changes in the Skin from Treatment with a 755nm Picosecond Alexandrite Laser with a Fractional Optic Tanghetti E. Annual Meeting April 24-25, 2015. <i>Lasers Surg Med</i> 2015; S69, p 24.</p> <p>■ LIOB creation initiates epidermal repair mechanism to help revitalize skin</p>	Acne Scars
52.	<p>A Retrospective Chart Review to Assess the Safety Profile of the 755nm Alexandrite Picosecond Laser with the Diffractive Lens Array in Fitzpatrick Skin Types IV-VI Geronemus RG. Annual Meeting April 24-25, 2015. <i>Lasers Surg Med</i> 2015; LB32, p 16.</p> <p>■ Safe & effective treatment of unwanted scars, pigment, striae in dark skin patients</p>	Acne Scars Pigmented Lesions Striae
53.	<p>A Retrospective Study of a 755nm Picosecond Laser for the Treatment of Benign Pigmentary Lesions in Chinese Shek S, Yeung CK, Chan JC, Chan HH. Annual Meeting April 24-25, 2015. <i>Lasers Surg Med</i> 2015; S79, p 27.</p> <p>■ 755nm can safely & effectively treat pigmentary skin disorders in Chinese</p>	Acne Scars Pigmented Lesions Wrinkles
54.	<p>Evaluation of the Safety and Efficacy of a Picosecond Laser with a Specialized Diffractive Lens Array for the Treatment of Abdominal Striae Beasley K, et al. Annual Meeting April 24-25, 2015. <i>Lasers Surg Med</i> 2015; E20, p 9.</p> <p>■ 755nm/Focus treatments can improve the appearance of abdominal striae</p>	Striae
55.	<p>Gene Expression Analysis in Cultured Human Skin Fibroblasts Following Exposure to a Picosecond Pulsed Alexandrite Laser and Specially Designed Focus Optic McDaniel D. Annual Meeting April 24-25, 2015. <i>Lasers Surg Med</i> 2015; S22, p 8.</p> <p>■ Correlated up/down regulation of genes related to skin revitalization</p>	Pigmented Lesions Wrinkles
56.	<p>6 Month Post Assessment of Picosecond Pulsed Alexandrite Laser and Specially Designed Focus Optic For Pigment and Facial Rhytides McDaniel D. Annual Meeting April 24-25, 2015. <i>Lasers Surg Med</i> 2015; S22, p 8.</p> <p>■ 755nm/Focus showed lasting results for clearing pigment and rhytides</p>	Pigmented Lesions Wrinkles

	RECAPS OF ABSTRACT PRESENTATIONS AT ASLMS 2015	APPLICATIONS
57.	<p>Evaluation of the Safety and Efficacy of the Picosecond Alexandrite Laser with a Specialized Lens Array for Treatment of the Photoaging Décolletage Wu D, Goldman M. Annual Meeting April 24-25, 2015. Lasers Surg Med 2015; E55, p 25.</p> <p>■ 755nm/Focus safely & effectively revitalizes photodamaged décolletage</p>	Pigmented Lesions Décolletage
58.	<p>Treatment of a Traumatic Tattoo Using a Picosecond Alexandrite Laser Breithaupt A, Lask G. Annual Meeting April 24-25, 2015. Lasers Surg Med 2015; S151, p 51.</p> <p>■ Shows safe and successful clearance of traumatic tattoo in only 2 treatments</p>	Tattoos
59.	<p>Picosecond Laser Treatment of European Tattoos Hoffmann K. Annual Meeting April 24-25, 2015. Lasers Surg Med 2015; S56, p 19.</p> <p>■ 755nm effectively clears most ink colors faster than QS/nanosecond lasers</p>	Tattoos

	RECAPS OF ABSTRACT PRESENTATIONS AT ASLMS 2014	APPLICATIONS
60.	<p>Treatment of Resistant Tattoos with Picosecond Alexandrite Laser Weiss R, Weiss M, Trageser M, Lorden F, Beasley K. Annual Meeting Annual Meeting April 24-25, 2015. Lasers Surg Med 2015; S57, p 20.</p> <p>■ 755nm efficacy demonstrated in clearing stubborn QS-treated tattoos</p>	Tattoos
61.	<p>Clinical Evaluation of the Picosecond 532nm, 755nm, and 1064nm Wavelengths for the Removal of Tattoos Prather H, Desai S, Kruter L, Depina J, Doherty S, Arndt K, Dover J. Annual Meeting April 24-25, 2015. Lasers Surg Med 2015; S58, p 20.</p> <p>■ Black ink responded slightly better to 755 (vs 1064); 755/532 for all colors</p>	Tattoos
62.	<p>A New Paradigm for Optimal Tattoo Removal Using Three Picosecond Laser Wavelengths Alabdulrazzaq H, Bae YS, Bloom B, Brauer JA, Anolik R, Bernstein L, Weiss E, Geronemus, RG. Annual Meeting April 24-25, 2015. Lasers Surg Med 2015; S54, p 19.</p> <p>■ 755/532 ideal for all colors incl black, 1064 may be helpful in STs V-VI</p>	Tattoos

	RECAPS OF ABSTRACT PRESENTATIONS AT ASLMS 2014	APPLICATIONS
63.	Picosecond Laser for Reduction of Wrinkles <i>Weiss RA, Weiss MA, Beasley K. Annual Meeting April 2-6, 2014. Lasers Surg Med 2014;S26, p9.</i> <ul style="list-style-type: none"> Treatments reduced appearance of fine lines/wrinkles with minimal downtime 	Wrinkles
64.	Treatment of Facial Photodamage and Rhytides Using a Picosecond Pulsed Alexandrite Laser and Specially Designed Focus Optic <i>McDaniel D. Annual Meeting April 2-6, 2014. Lasers Surg Med 2014;S26, p10.</i> <ul style="list-style-type: none"> 2-4 treatments reduce pigment dyschromia, photodamage, fine lines/wrinkles 	Wrinkles Skin Revitalization
65.	Evaluation of Safety and Efficacy Following Pico-pulsed Alexandrite Laser Treatment to the Solar Lentigines on the Dorsum of the Hand <i>Saluja R. Annual Meeting April 2-6, 2014. Lasers Surg Med 2014;S26(e-poster), p 40.</i> <ul style="list-style-type: none"> Flat 6mm spot safely cleared unwanted pigment on hands in 1-2 treatments 	Pigmented Lesions On the Hand
66.	Diffraction Lens Array With Picosecond Laser for Facial Acne Scarring: Follow Up and Histology <i>Geronemus R, Kazlouskaya V, Bae YS, Alabdulrazzaq H, Bernstein L, Anolik R, Heller P, Brauer J. Annual Meeting April 2-6, 2014. Lasers Surg Med 2014; S26, p4</i> <ul style="list-style-type: none"> Maintained improvement in appearance and texture at 3 months after last 755nm Focus treatment with histology support. 	Acne Scars

	RECAPS OF ABSTRACT PRESENTATIONS AT ASLMS 2013	APPLICATIONS
67.	Rapid Removal of Red Tattoo Pigment with a Novel 532nm Nd:YAG Picoseconds Laser <i>Alabdulrazzaq H, Bae YS, Brauer J, Geronemus R. Annual Meeting April 2-6, 2014. Lasers Surg Med 2014; S26, p15</i> <ul style="list-style-type: none"> >75% clearance in red tattoo pigment after 1 treatment with 532nm picosecond laser 	Tattoos

	RECAPS OF ABSTRACT PRESENTATIONS AT ASLMS 2013	APPLICATIONS
68.	<p>Single vs. Repeat Exposure Tattoo Removal during Single Sessions with Picosecond Pulse Duration Laser Technology</p> <p>Kilmer S, Custis T. Annual Meeting April 2-6, 2014. <i>Lasers Surg Med</i> 2014;S26, p15.</p> <p>■ Using either R20 or single pass treatment method is safe and efficacious</p>	Tattoos
69.	<p>Dose Optimization with a Picosecond 755nm Alexandrite Laser For Tattoo Removal</p> <p>Tanghetti E, Tanghetti M. Annual Meeting April 2-6, 2014. <i>Lasers Surg Med</i> 2014;S26, p16.</p> <p>■ Lower doses appear to have comparable efficacy with fewer side effects</p>	Tattoos
70.	<p>A Clinical and Histological Study of Skin Treated with a Picosecond Alexandrite Laser Using a Traditional and Fractional Lens Array</p> <p>Tanghetti, E. Annual Meeting April 2-6, 2014. <i>Lasers Surg Med</i> 2014;S26, p 28.</p> <p>■ 755nm/Focus LIOBs & dermal healing response observed histologically</p>	Tattoos
71.	<p>Evaluation Of A Picosecond 755 Nm Alexandrite Laser And Defractive Lens Array For Scarring</p> <p>Brauer, Jeremy & Correa, Lilia & Bernstein, Leonard & Hale, Elizabeth & Karen, Julie & Brightman, Lori & Weiss, Elliot & Anolik, Robert & Geronemus, Roy. (2013). <i>Lasers in Surgery and Medicine</i>. 45. 15-15.</p> <p>■ 2/3 patients received >50% improvement in texture and appearance of acne scars in 3 treatments.</p>	Acne Scars
72.	<p>Confirmatory Study of Picosecond 755nm Alexandrite Laser</p> <p>JRobinson, Deanne & Saedi, Nazanin & Petrell, Kathleen & Arndt, Kenneth & Dover, Jeffrey. (2013). <i>Lasers in Surgery and Medicine</i>. 45. 9-10.</p> <ul style="list-style-type: none"> • 755nm picosecond laser is safe and effective for tattoo and clears 50% more rapidly than historical controls. 	Tattoos
73.	<p>Impact of Pulse Duration From Nanoseconds to Picoseconds on the Thermal and Mechanical Effects During Laser Interaction with Tattoo Targets</p> <p>Sierra, Rafael & Mirkov, Mirko. (2013). <i>Lasers in Surgery and Medicine</i>. 45. 29-30.</p> <p>■ Picosecond laser creates stronger mechanical stress fracturing tattoo particles and improved clinical performance.</p>	Tattoos