BIBLIOGRAPHY

IRIDEX | MicroPulse®

Bibliography of published articles, posters, and podium presentations on MicroPulse® Laser Therapy

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RETINA: CLINICAL

Age-Related Macular Degeneration

Articles

1. Luttrull DK, Chang DB, Margolis BW, Dorin G, Luttrull KD. Laser resensitization of medically unresponsive neovascular age-related macular degeneration. Efficacy and Implications. *Retina,* 2015;35(6):1184-94.
2. Luttrull JK, Margolis BW. Functionally guided retinal protective therapy for dry age-related macular and inherited retinal degenerations: A pilot study. *Invest Ophthalmol Vis Sci,* 2016;57:(1)265-75.
3. Luttrull JK, Sinclair SH, Elmann S, Glaser BM. Low incidence of choroidal neovascularization following subthreshold diode micropulse laser (SDM) in high-risk AMD. *PLoS One*, 2018;13(8):e0202097.

Diabetic Retinopathy: Diabetic Macular Edema

Articles

4. Friberg TR, Karatza EC. The treatment of macular disease using a micropulsed and continuous wave 810-nm diode laser. *Ophthalmology,* 1997;104(12):2030-8.
5. Moorman CM, Hamilton AMP. Clinical applications of the MicroPulse diode laser. *Eye,* 1999;13(Pt2):145-50.
6. Stanga PE, Reck AC, Hamilton AMP. Micropulse laser in the treatment of diabetic macular edema. *Semin Ophthalmol,* 1999;14(4):210-13.
7. Friberg TR. Infrared micropulsed laser treatment for diabetic macular edema – subthreshold versus threshold lesions. *Semin Ophthalmol,* 2001;16(1):19-24.
8. Olk RJ, Akduman L. Minimal intensity diode laser photocoagulation (MIP) for diffuse DME. *Semin Ophthalmol,* 2001;16(1):25-30.
9. Laursen ML, Moeller F, Sander B, Sjoelie AK. Subthreshold micropulse diode laser treatment in diabetic macular oedema. *Br J Ophthalmol,* 2004;88(9):1173-9.
10. Bhagat N, Zarbin MA. Use of diode subthreshold micropulse laser for treating diabetic macular edema. *Contemp Ophthalmol,* 2004;3(13):1-10.
11. Tseng Shih-Yu. Clinical application of micropulse diode laser in the treatment of macular edema. *Am J Ophthalmol,* 2005;139(4):S58.
12. Luttrull JK, Musch DC, Mainster MA. Subthreshold diode micropulse photocoagulation for the treatment of clinically significant diabetic macular oedema. *Br J Ophthalmol,* 2005;(1):89:74-80.
13. Luttrull JK, Spink CJ. Serial optical coherence tomography of subthreshold diode laser micropulse photocoagulation for diabetic macular edema. *Ophthalmic Surg Lasers Imaging,* 2006;37(5):370-7.
14. Dare A, Castro L, Lavinsky D, Navajas E, Cardillo JA. Novos horizontes no tratamento do edema de macula diabetico: Fotocoagulacao macular seletiva com micropulse de diodo 810 nm. *JBO,* 2007;13:16-20.
15. Sivaprasad S, Sandhu R, Tandon A, Sayed-Ahmed K, McHugh DA. Subthreshold micropulse diode laser photocoagulation for clinically significant diabetic macular oedema: A three-year follow up. *Clin Exp Ophthalmol,* 2007;35(7):640-4.
16. Fletcher E, Chong V. Diabetic macular oedema – is micropulse laser treatment the way forward? *Ophthalmology International,* 2008;3(1):19-22.
17. Nakamura Y, Tatsumi T, Arai M, Takatsuna Y, Mitamura Y, Yamamoto S. [Subthreshold micropulse diode laser photocoagulation for diabetic macular edema with hard exudates]. *Nippon Ganka Gakkai Zasshi,* 2009;113(8):787-91.
18. Figueira J, Khan J, Nunes S, Sivaprasad S, Rosa A, de Abreu JF, Cunha-Vaz JG, Chong NV. Prospective randomised controlled trial comparing sub-threshold micropulse diode laser photocoagulation and conventional green laser for clinically significant diabetic macular oedema. *Br J Ophthalmol,* 2009;93(10):1341-4.
19. Ohkoshi K, Yamaguchi T. Subthreshold micropulse diode laser photocoagulation for diabetic macular edema in Japanese patients. *Am J Ophthalmol,* 2010;149(1):133-9.
20. Nakamura Y, Mitamura Y, Ogata K, Arai Mz, Takatsuna Y, Yamamoto S. Functional and morphological changes of macula after subthreshold micropulse diode laser photocoagulation for diabetic macular oedema. *Eye* (Lond), 2010;24(5):784-8.
21. Vujosevic S, Bottega E, Casciano M, Pilotto E, Convento E, Midena E. Microperimetry and fundus autofluorescence in diabetic macular edema: Subthreshold micropulse diode laser versus modified early treatment diabetic retinopathy study laser photocoagulation. *Retina,* 2010;30(6):908-16.
22. Venkatesh P, Ramanjulu R, Azad R, Vohra R, Garg S. Subthreshold micropulse diode laser and double frequency neodymium:YAG laser in treatment of diabetic macular edema: A prospective, randomized study using multifocal electroretinography. *Photomed Laser Surg,* 2011;29(11):727-33.
23. Lavinsky D, Cardillo JA, Melo LA, Jr., Dare A, Farah ME, Belfort R, Jr. Randomized clinical trial evaluating mETDRS versus normal or high-density micropulse photocoagulation for diabetic macular edema. *Invest Ophthalmol Vis Sci,* 2011;52(7):4314-23.
24. Takatsuna Y, Yamamoto S, Nakamura Y, Tatsumi T, Arai M, Mitamura Y. Long-term therapeutic efficacy of the subthreshold micropulse diode laser photocoagulation for diabetic macular edema. *Jpn J Ophthalmol,* 2011;55(4):365-369.
25. Luttrull JK, Sramek C, Palanker D, Spink CJ, Musch DC. Long-term safety, high-resolution imaging, and tissue temperature modeling of sub-visible diode micropulse photocoagulation for retinovascular macular edema. *Retina,* 2012;32(2):375-86.

26. Sivaprasad S, Dorin G. Subthreshold diode laser micropulse photocoagulation for the treatment of diabetic macular edema. *Expert Review of Medical Devices,* 2012;9(2):189-197.
27. Inagaki K, Iseda A, Ohkoshi K. [Subthreshold micropulse diode laser photocoagulation combined with direct photocoagulation for diabetic macular edema in Japanese patients]. *Nihon Ganka Gakkai Zasshi,* 2012;116(6):568-74.
28. Luttrull JK, Dorin G. Subthreshold diode micropulse laser photocoagulation (SDM) as invisible retinal phototherapy for diabetic macular edema: A review. *Curr Diabetes Rev,* 2012;8274-284.
29. Inagaki K, Ohkoshi K, Ohde S. Spectral-domain optical coherence tomography imaging of retinal changes after conventional multicolor laser, subthreshold micropulse diode laser, or pattern scanning laser therapy in Japanese with macular edema. *Retina,* 2012;32(8):1592-1600.
30. Vujosevic S, Martini F, Convento E, Longhin E, Kotsafti O, Parrozzani R, Midena E: Subthreshold laser therapy for diabetic macular edema: Metabolic and safety issues. *Curr Med Chem,* 2013;20(26):3267-71.
31. Othman IS, Eissa SA, Kotb MS, Sadek SH: Subthreshold diode-laser micropulse photocoagulation as a primary and secondary line of treatment in management of diabetic macular edema. *Clin Ophthalmol,* 2014;8:653-9.
32. Nicolo M, Musetti D, Traverso CE: Yellow micropulse laser in diabetic macular edema: A short-term pilot study. *Eur J Ophthalmol* 2014, Nov-Dec;24(6):885-9.
33. Luttrull JK, Sinclair SH: Safety of transfoveal subthreshold diode micropulse laser for fovea-involving diabetic macular edema in eyes with good visual acuity. *Retina,* 2014;34(10):2010-2020.
34. Yadav NK, Jayadev C, Rajendran A Nagpal, M: Recent developments in retinal lasers and delivery systems. *Indian J Ophthalmol,* 2014;62(1):50-4.
35. Mansouri A, Sampat KM, Malik KJ, Steiner JN, Glaser BM. Efficacy of subthreshold micropulse laser in the treatment of diabetic macular edema is influenced by pre-treatment central foveal thickness. *Eye* (Lond), 2014;28:(12)1418-24.
36. Inagaki K, Ohkoshi K, Ohde S, Deshpande G, Ebihara N, Murakami A: Comparative efficacy of pure yellow (577nm) and 810 nm subthreshold micropulse laser photocoagulation combined with yellow (561–577-nm) direct photocoagulation for diabetic macular edema. *Jpn J Ophthalmol,* 2015;59(1):21-8.
37. Vujosevic S, Martini F, Longhin E, Convento E, Cavarzeran F, Midena E. Subthreshold micropulse yellow laser versus subthreshold micropulse infrared laser in center-involving diabetic macular edema: Morphologic and functional safety. *Retina,* 2015;35(8):1594-603.
38. Elhamid AHA. Combined intravitreal dexamethasone implant and micropulse yellow laser for treatment of anti-VEGF resistant diabetic macular edema. *The Open Ophthalmology Journal,* 2017;11164-172.
39. Latalska M, Prokopiuk A, Wróbel-Dudzińska D, Mackiewicz J. Subthreshold micropulse yellow 577 nm laser therapy of diabetic macular oedema in rural and urban patients of south-eastern poland. *Annals of Agricultural and Environmental Medicine,* 2017;24(1):96-99.
40. Wu Y, Ai P, Ai Z, Xu G. Subthreshold diode micropulse laser versus conventional laser photocoagulation monotherapy or combined with anti-VEGF therapy for diabetic macular edema: A bayesian network meta-analysis. *Biomedicine & Pharmacotherapy*, 2018;97293-299.
41. Moisseiev E, Abbassi S, Thinda S, Yoon J, Yiu G, Morse LS. Subthreshold micropulse laser reduces anti-VEGF injection burden in patients with diabetic macular edema. *Eur J Ophthalmol*, 2018;28(1):68-73.
42. Midena E, Bini S, Martini F, Enrica C, Pilotto E, Micera A, Esposito G, Vujosevic S. Changes of aqueous humor Müller cells' biomarkers in human patients affected by diabetic macular edema after subthreshold micropulse laser treatment. *Retina*, 9000; Published ahead of print.
43. Vujosevic S, Frizziero L, Martini F, Bini S, Convento E, Cavarzeran F, Midena E. Single retinal layer changes after subthreshold micropulse yellow laser in diabetic macular edema. *Ophthalmic Surg Lasers Imaging Retina*, 2018;49(11):e218-e225.
44. Akhlaghi M, Dehghani A, Pourmohammadi R, Asadpour L, Pourazizi M. Effects of subthreshold diode micropulse laser photocoagulation on treating patients with refractory diabetic macular edema. *J Curr Ophthalmol*, 2019;31(2):157-160.
45. Inagaki K, Hamada M, Ohkoshi K. Minimally invasive laser treatment combined with intravitreal injection of anti-vascular endothelial growth factor for diabetic macular oedema. *Sci Rep*, 2019;9(1):7585.
46. Lois N, Gardner E, Waugh N, Azuara-Blanco A, Mistry H, McAuley D, Acharya N, Aslam TM, Bailey C, Chong V, Downey L, Eleftheriadis H, Fatum S, George S, Ghanchi F, Groppe M, Hamilton R, Menon G, Saad A, Sivaprasad S, Shiew M, Steel DH, Talks JS, Adams C, Campbell C, Mills M, Clarke M, Group DS. Diabetic macular oedema and diode subthreshold micropulse laser (DIAMONDS): Study protocol for a randomised controlled trial. *Trials*, 2019;20(1):122.
47. Midena E, Bini S, Frizziero L, Pilotto E, Esposito G, Micera A. Aqueous humour concentrations of PEDF and Erythropoietin are not influenced by subthreshold micropulse laser treatment of diabetic macular edema. *Biosci Rep*, 2019;39(6).
48. Midena E, Micera A, Frizziero L, Pilotto E, Esposito G, Bini S. Sub-threshold micropulse laser treatment reduces inflammatory biomarkers in aqueous humour of diabetic patients with macular edema. *Sci Rep*, 2019;9(1):10034.
49. Midena E, Bini S, Martini F, Enrica C, Pilotto E, Micera A, Esposito G, Vujosevic S. Changes of aqueous humor muller cells' biomarkers in human patients affected by diabetic macular edema after subthreshold micropulse laser treatment. *Retina*, 2020;40(1):126-134.

50. Vujosevic S, Gatti V, Muraca A, Brambilla M, Villani E, Nucci P, Rossetti L, De Cilla' S. Optical coherence tomography angiography changes after subthreshold micropulse yellow laser in diabetic macular edema. *Retina*, 2020;40(2):312-321.

Posters and Podium Presentations

51. Grigorian RA, Zarbin MA, Brimacombe R, Tutela A, Roy M, Bhagat N. Comparison of subthreshold micropulse diode laser photocoagulation with conventional laser photocoagulation for clinically significant macular edema in diabetic patients. *Invest Ophthalmol Vis Sci,* 2004;45:ARVO E-Abstract 4067.
52. Avery RL, Pieramici DJ, Nasir MA, Rhodes K, Robbins E. Micropulse laser for diabetic macular edema: A prospective pilot study. *Invest Ophthalmol Vis Sci,* 2004;45:E-Abstract 4143.
53. Zagidullina A, Battaglia Parodi M, Iacono P, Fachin A, Ravalico G. Subthreshold micropulse grid laser treatment for clinically significant diabetic macular edema. *Invest Ophthalmol Vis Sci,* 2007;48:E-Abstract 1403.
54. Bhagat N, Grigorian R, Zarbin MA, Roy M, Patel N. Subthreshold micropulse diode laser photocoagulation (SMDLP) for the treatment of diabetic clinically significant macular edema. SOE/AAO Joint Congress, Vienna 9-12 June, 2007. Abstract EP-RET-095.
55. Cardillo JA, Dare A, Peroni R, Lavinsky D, Costa RA, Moreira CE. Optimal endpoint and lesion character for subthreshold micropulse photocoagulation protocols targeting diabetic macular edema. ARVO Meeting Abstracts 2009;50(5):217.
56. Midena E, Vujosevic S, Pilotto E. In vivo laser-tissue interactions in central involving diabetic macular edema treated with subthreshold micropulse diode laser. Macula Society 2011, Boca Raton, FL.
57. Peroni R, Cardillo JA, Dare AJ, Aguirre JG, Lavinsky D, Farah ME, Belfort R. A combined low energy, short pulsed 577nm mild macular grid photocoagulation with 577 nm-micropulsed central laser stimulation for diabetic macular edema with foveal leakage (the sandwich grid). ARVO Meeting Abstracts 2011;52(6):590.
58. Aguirre JGM, Cardillo JA, Dare AJ, Peroni R, Lavinsky D, Farah ME, Belfort R. 577 nm short pulsed and low energy selective macular grid laser photocoagulation for diffuse diabetic macular edema. ARVO Meeting Abstracts 2011;52(6):592.
59. Saksonov S, Suk S, Rykov S, Kuznecova T, Milienko M. Advantages of subthreshold micropulse yellow 577 nm coagulation in comparison with classic modified ETDRS focal-grid laser photocoagulation in diffuse diabetic macular edema. Paper. XX Annual Meeting - Combined Meeting of VIth APVRS & XXth VRSI. Hyderabad, India. December 1 - 3, 2011.
60. Monaco P, Cappello E, Cirone M, Del Borrello M, Tollot L, Frattolillo A, Vaccaro M, Sperti F, Cigada MV. Subthreshold micropulse diode laser versus conventional green laser in clinically significant diabetic macular edema. ARVO Meeting Abstracts 2012;53(6):413.
61. Flores-Aguilar M, Flores-Aguilar C. Micropulsed 577 nm laser stimulation for diabetic macular edema with foveal leakage. ARVO Meeting Abstracts 2012;53(6):418.
62. Othman I., MicroPulse laser following intra vitreal bevacizumab in diffuse DME. 12th EVRS Congress, Dresden, Germany. September 15 – 18, 2012.
63. Sinclair S. MicroPulse contiguous grid laser for resistant diffuse DME. 12th EVRS Congress, Dresden, Germany. September 15 – 18, 2012.
64. Martin Flores-Aguilar, Micropulsed 577 nm laser stimulation for DME. 12th EVRS Congress, Dresden, Germany. September 15 – 18, 2012.
65. Fruschelli M, Sparagna MC, Denaro R, Menicacci F, Esposti G, Esposti PL. Subthreshold micropulse photostimulation with true yellow 577 nm diode laser for macular edema. 12th EVRS Congress. Dresden, Germany. September 15 - 18, 2012.
66. Morrison-Reyes J, Mansour S, Mathura J. Treatment of refractory macular edema following intravitreal pharmacotherapy with the 577 nm micropulse subthreshold grid laser. 30th Anniversary Annual Scientific Meeting of the American Society of Retina Specialists. Las Vegas, NV. 2012.
67. Sinclair SH, Zhang Y, Kasenchak J, Parvus BJ, Presit P. Micropulse contiguous grid laser for resistant diffuse diabetic macular edema (DDME). 30th Anniversary Annual Scientific Meeting of the American Society of Retina Specialists. Las Vegas, NV. 2012.
68. Peroni R, Cardillo JA, Dare AJ, Jorge R: Microperimetry-guided micropulsed laser photo stimulation for the treatment of diabetic macular edema. *Invest Ophthalmol Vis Sci,* 2013;54:E-Abstract 2365.
69. Adyanthaya, R, Zavala, G, Gonzalez, V: Subthreshold micropulse diode laser photocoagulation as monotherapy for mild to moderate diabetic macular edema. *Invest Ophthalmol Vis Sci,* 2013;54(6):E-Abstract 2381.
70. Subbiah S, Donaldson M, Pradhan M: Tissue sparing micropulse laser for the treatment of diabetic macular oedema. *Invest Ophthalmol Vis Sci,* 2013;54(6):E-Abstract 2382.
71. Wong S, Ramenaden E, Alhabshan R, Smithen L, Mathura RJ: The efficacy and safety of 577-nm subthreshold diode micropulse photocoagulation in macular edema. *Invest Ophthalmol Vis Sci,* 2014;55:E-Abstract 6360.
72. Choi SS, Wells-Gray E, Ohr MP, Doble N. Retinal integrity after short wavelength subthreshold micropulse laser therapy for diabetic macular edema. *Invest Ophthalmol Vis Sci,* 2017;58(8):945-945.
73. Midena G, Vujosevic S, Martini F, Convento E, Pilotto E, Federici M, Pagliei V, Minnella AM, Midena E. Retinal layers and microperimetry changes after subthreshold micropulse laser in the treatment of diabetic macular edema. *Invest Ophthalmol Vis Sci,* 2017;58(8):947-947.

74. Cappello E, Cecchin E, Della Guardia C, Morselli S. Ocular photostimulation with the 577 nm micropulse yellow laser in the management of clinically significant diabetic macular edema (CSDME) – 4th year of follow-up. *Invest Ophthalmol Vis Sci*, 2018;59(9):4845-4845.
75. Mughal M, Chang E, Alexander JM, Morcos MM. Comparing intravitreal bevacizumab, sub threshold macular laser (stml) and intravitreal dexamethasone implant (0.7mg) in the initial treatment of diabetic macular edema (DME) in a resident led clinic. *Invest Ophthalmol Vis Sci*, 2019;60(9):3681-3681.

CME Course

76. Majcher C, Gurwood AS. A review of micropulse laser photocoagulation. *Review of Optometry* 2011;CE Course: Release Date: November 2011; Expiration Date: December 1, 2014.

Diabetic Retinopathy: Proliferative Diabetic Retinopathy

Articles

77. Moorman CM, Hamilton AMP. Clinical applications of the micropulse diode laser. *Eye* 1999;13(Pt2):145-50.
78. Luttrull JK, Musch DC, Spink CA. Subthreshold diode micropulse panretinal photocoagulation for proliferative diabetic retinopathy. *Eye* (Lond), 2008;22(5):607-12.
79. Kumar V, Ghosh B, Raina UK, Goel N. Subthreshold diode micropulse panretinal photocoagulation for proliferative diabetic retinopathy. *Eye* 2009;23(11):2122-23.
80. Luttrull JK, Musch D, Spink C. Reply to Dr Kumar, et al. *Eye* 2009;23(11):2123.

Macular Edema Secondary to Branch Retinal Vein Occlusion

Articles

81. Parodi MB, Spasse S, Iacono P, Di Stefano G, Canziani T, Ravalico G. Subthreshold grid laser treatment of macular edema secondary to branch retinal vein occlusion with micropulse infrared (810 nanometer) diode laser. *Ophthalmology,* 2006;113(12):2237-42.
82. Parodi MB, Iacono P, Ravalico G. Intravitreal triamcinolone acetonide combined with subthreshold grid laser treatment for macular edema in branch retinal vein occlusion: A pilot study. *Br J Ophthalmol,* 2008;92(8):1046-50.
83. Inagaki K, Ohkoshi K, Ohde S, Deshpande GA, Ebihara N, Murakami A: Subthreshold micropulse photocoagulation for persistent macular edema secondary to branch retinal vein occlusion including best-corrected visual acuity greater than 20/40. *J Ophthalmol,* 2014;2014251257.
84. Terashima H, Hasebe H, Okamoto F, Matsuoka N, Sato Y, Fukuchi T. Combination therapy of intravitreal ranibizumab and subthreshold micropulse photocoagulation for macular edema secondary to branch retinal vein occlusion: 6-month result. *Retina*, 2019;39(7):1377-1384.

Posters and Podium Presentations

85. Saksonov S, Suk S, Tatiana K, Polina A. Advantages of subthreshold micropulse 577 nm yellow laser in comparison with classic laser photocoagulation in macular edema secondary to BRVO. Poster PO1-040. XX Annual Meeting - Combined Meeting of VIth APVRS & XXth VRSI. Hyderabad, India. December 1 - 2, 2011.

Cystoid Macular Edema Secondary to Central Vein Occlusion

Posters and Podium Presentations

86. Saksonov S, Suk S, Rykov S, Denisuk N, Romanava T. Micropulse 577 nm yellow laser combined with intravitreal ranibizumab in comparison with ranibizumab as monotherapy in cystoid macular edema secondary to CVO. XX Annual Meeting - Combined Meeting of VIth APVRS & XXth VRSI. Hyderabad, India. December 1 - 2, 2011.
87. Saskonov S, Suk S. Micropulse 577 nm yellow laser combined with intravitreal ranibizumab in comparison with ranibizumab as monotherapy in CVO. 12th EURETINA Congress. Milan, Italy. 6-9 September, 2012.
88. Salvetti P, de Polo L, Oldani M, Ruello R: Early changes on SD-OCT in eyes with cystoid macular edema (CME) after 577 nm subthreshold micropulse laser treatment (MPLT). *Invest Ophthalmol Vis Sci,* 2013;(54):E-Abstract 4141.
89. Aguirre JG, Dare AJ: Micropulse laser therapy for the treatment of longstanding refractory pseudophakic cystoid macular edema. *Invest Ophthalmol Vis Sci,* 2014;(55):E-Abstract 6356.
90. Wong SS, Alhabshan RN, Lee JY, McLaughlin JP, Ding R, Mansour SE: The effect of micropulse laser therapy on macular edema associated with retinal vein occlusions. Poster. ASRS, San Diego, CA. 2014.

Central Serous Chorioretinopathy

Articles

91. Ricci F, Missiroli F, Cerulli L. Indocyanine green dye-enhanced micropulsed diode laser: A novel approach to subthreshold RPE treatment in a case of central serous chorioretinopathy. *Eur J Ophthalmol,* 2004;14(1):74-82.

92. Lanzetta P, Furlan F, Morgante L, Verritti D, Bandello F. Nonvisible subthreshold micropulse diode laser (810 nm) treatment of central serous chorioretinopathy. A pilot study. *Eur J Ophthalmol,* 2008;18(6):934-40.80.
93. Chen SN, Hwang JF, Tseng LF, Lin CJ. Subthreshold diode micropulse photocoagulation for the treatment of chronic central serous chorioretinopathy with juxtafoveal leakage. *Ophthalmology,* 2008;115(12):2229-34.
94. Ricci F, Missiroli F, Regine F, Grossi M, Dorin G. Indocyanine green enhanced subthreshold diode-laser micropulse photocoagulation treatment of chronic central serous chorioretinopathy. *Graefes Arch Clin Exp Ophthalmol,* 2009;247(5):597-607.
95. Gupta B, Elagouz M, McHugh D, Chong V, Sivaprasad S. Micropulse diode laser photocoagulation for central serous chorio-retinopathy. *Clin Exp Ophthalmol,* 2009;37(8):801-5.
96. Koss MJ, Beger I, Koch FH. Subthreshold diode laser micropulse photocoagulation versus intravitreal injections of bevacizumab in the treatment of central serous chorioretinopathy. *Eye* (Lond), 2012;26(2):307-14.
97. Beger I, Koss M, Koch F. [treatment of central serous chorioretinopathy: Micropulse photocoagulation versus bevacizumab.]. *Ophthalmologe Online First,* 6 October 2012.
98. Roisman L, Magalhaes FP, Lavinsky D, Moraes N, Hirai FE, Cardillo JA, Farah ME: Micropulse diode laser treatment for chronic central serous chorioretinopathy: A randomized pilot trial. *Ophthalmic Surg Lasers Imaging Retina,* 2013;44(5):465-70.
99. Malik KJ, Sampat KM, Mansouri A, Steiner JN, Glaser BM: Low-intensity/high-density subthreshold micropulse diode laser for chronic central serous chorioretinopathy. *Retina,* 2015;35(3):532-536.
100. Kretz FT, Beger I, Koch F, Nowomiejska K, Auffarth GU, Koss MJ. Randomized clinical trial to compare micropulse photocoagulation versus half-dose verteporfin photodynamic therapy in the treatment of central serous chorioretinopathy. *Ophthalmic Surg Lasers Imaging Retina,* 2015;46(8):837-43.
101. Breukink MB, Mohr JK, Ossewaarde-van Norel A, den Hollander AI, Keunen JE, Hoyng CB, Boon CJ. Half-dose photodynamic therapy followed by diode micropulse laser therapy as treatment for chronic central serous chorioretinopathy: Evaluation of a prospective treatment protocol. *Acta Ophthalmologica,* 2016;94(2):187-97.
102. Luttrull JK. Low-intensity/high-density subthreshold diode micropulse laser for central serous chorioretinopathy. *Retina,* 2016;36(9):1658-63.
103. Maruko I, Koizumi H, Hasegawa T, Arakawa H, Iida T. Subthreshold 577 nm micropulse laser treatment for central serous chorioretinopathy. *PloS One,* 2017;12(8):e0184112.
104. van Dijk EHC, Fauser S, Breukink MB, Blanco-Garavito R, Groenewoud JMM, Keunen JEE, Peters PJH, Dijkman G, Souied EH, MacLaren RE, Querques G, Downes SM, Hoyng CB, Boon CJF. Half-dose photodynamic therapy versus high-density subthreshold micropulse laser treatment in patients with chronic central serous chorioretinopathy: The place trial. *Ophthalmology*, 2018;125(10):1547-1555.
105. Luttrull JK. Comment on: Van rijssen tj, van dijk ehc, scholz p, et al. Focal and diffuse chronic central serous chorioretinopathy treated with half- dose photodynamic therapy or subthreshold micropulse laser: Place trial report no. 3. *Am J Ophthalmol*, 2019;In Press.
106. Arora S, Sridharan P, Arora T, Chhabra M, Ghosh B. Subthreshold diode micropulse laser versus observation in acute central serous chorioretinopathy. *Clin Exp Optom*, 2019;102(1):79-85.
107. Striebe NA, Feltgen N, Khattab MH, Spier L, Callizo J, Bemme S, Hoerauf H, van Oterendorp C. [Does the micropulse laser have an effect on chronic CSC?]. *Ophthalmologe*, 2019;116(9):850-856.
108. van Rijssen TJ, van Dijk EHC, Scholz P, Breukink MB, Blanco-Garavito R, Souied EH, Keunen JEE, MacLaren RE, Querques G, Fauser S, Downes SM, Hoyng CB, Boon CJF. Focal and diffuse chronic central serous chorioretinopathy treated with half-dose photodynamic therapy or subthreshold micropulse laser: Place trial report no. 3. *Am J Ophthalmol*, 2019;2051-10.

Posters and Podium Presentations

109. Dare AR, Cardillo JA, Tognin F. Sub-threshold infrared micro pulsed laser treatment for chronic central serous choroidopathy *Invest Ophthalmol Vis Sci,* 2008;49:ARVO E-Abstract 4718.
110. Keunen JE, Pijl BJ, Theelen T. Micropulse diode laser treatment in central serous chorioretinopathy. 26th Meeting of the Club Jules Gonin, September 2008, St. Moritz, Switzerland. Abstract 87.
111. Dare AR, Lavinsky D, Magalhaes F, Roisman L, Tognin F, Moreira CE, Cardillo JA. Focal juxtafoveal and grid pattern selective micropulse laser photocoagulation for treatment of chronic central serous chorioretinopathy. *Invest Ophthalmol Vis Sci,* 2009;50:ARVO E-Abstract 214.
112. Cardillo JA, Lavinsky D, Magalhaes F, Roisman L, Farah ME, Dare AJR. An optimized focal juxtafoveal and grid pattern subthreshold laser photocoagulation technique for the treatment of central serous chorioretinopathy. Retina Congress 2009, New York, NY. Scientific Paper, Page 69.
113. Keunen JE, Pijl BJ, Theelen T. Micropulse diode laser treatment in central serous chorioretinopathy. Retina Congress 2009, New York, NY. Scientific Poster 910, Page 217.
114. Dare AJ, Peroni R, Castro L, Moreira CE, Lavinsky D, Magalhaes F, Cardillo JA. Subfoveal subthreshold laser photocoagulation technique for the treatment of central serous chorioretinopathy. *Invest Ophthalmol Vis Sci,* 2010;51(5):1347.

115. Maia AM, Penha FM, Regatieri CVS, Cardillo JA, Farah ME. Micropulse 577nm - yellow laser photocoagulation for central serous chorio-retinopathy. *Invest Ophthalmol Vis Sci,* 2010;51(5):4273.
116. Dare AJ, Cardillo JA, Lavinsky D, Belfort R, Jr., Moreira CE. 577 nm yellow selective subthreshold laser photocoagulation for the treatment of central serous chorioretinopathy with foveal leakage. *Invest Ophthalmol Vis Sci,* 2011;52(6):6622.
117. Fruschelli M, Sparagna MC, Denaro R, Menicacci F, Esposti G, Esposti PL. Subthreshold micropulse photostimulation with true yellow 577 nm diode laser for macular edema. 12th EVRS Congress. Dresden, Germany. September 15 - 18, 2012.
118. Saskonov S, Suk S. Subthreshold miropulse 577 nm coagulation of multifocal central serous chorioretinopathy. 12th EURETINA Annual Congress. Milan, Italy. 6-9 September, 2012.
119. Giralt J, Casaroli-Marano RP, Burés-Jelstrup A: Subthreshold diode micropulse laser photocoagulation versus low-fluence photodynamic therapy for the treatment of chronic central serous chorioretinopathy. *Invest Ophthalmol Vis Sci,* 2013;54:E-Abstract 4140.
120. Dare AJ, Peroni R, Paganelli F, Castro LC: Micropulsed laser therapy outcomes in the treatment of chronic central serous chorioretinopathy based on leakage pattern. *Invest Ophthalmol Vis Sci,* 2014;(55):E-Abstract 6385.
121. Estephania F. Subthreshold 577 nm micropulse laser for the treatment of chronic central serous chorioretinopathy (CCSC). *Invest Ophthalmol Vis Sci,* 2017;58(8):5926-5926.

Idiopathic Polypoidal Choroidal Vasculopathy

Posters and Podium Presentations

122. Alnahrawy A. Efficacy of micropulse laser in treatment of idiopathic polypoidal choroidal vasculopathy (IPCV) unresponsive to aflibercept injections. World Glaucoma Conference, 2018, Barcelona, Spain.
123. Bellizzi G. Subthreshold micropulse 577nm. Laser in no-responder patient with juxtafoveal polypoidal neovascularization. World Glaucoma Conference, 2018, Barcelona, Spain.

Optic Disc Maculopathy

Articles

124. Valdes-Lara CA, Crim N, Garcia-Aguirre G, Lule IA, Morales-Canton V. Micropulse laser for persistent optic disc pit maculopathy. A case report. *Am J Ophthalmol Case Reports*, 2018;10282-284.

Retinitis Pigmentosa

Articles

125. Luttrull JK. Improved retinal and visual function following panmacular subthreshold diode micropulse laser for retinitis pigmentosa. *Eye,* 2018;32(6):1099-1110.

Serous Pigment Epithelium Detachment

Articles

126. Battaglia-Parodi M, Sheth S, Papayannis A, Bandello F. Treatment of serous pigment epithelium detachment with subthreshold micropulse diode laser photocoagulation: A case report. *Eur J Ophthalmol* 2009;19(5):887-9.

Symptomatic Retinal Arterial Macroaneurysms

Articles

127. Parodi MB, Iacono P, Ravalico G, Bandello F. Subthreshold laser treatment for retinal arterial macroaneurysm. *Br J Ophthalmol,* 2011;95(4):534-538.
128. Battaglia Parodi M, Iacono P, Pierro L, Papayannis A, Kontadakis S, Bandello FM. Subthreshold laser treatment versus threshold laser treatment for symptomatic retinal arterial macroaneurysm. *Invest Ophthalmol Vis Sci,* 2012;53(4):1783-6.

RETINA: PRE-CLINICAL

Articles

129. Pankratov MM. Pulsed delivery of laser energy in experimental thermal retinal photocoagulation. *SPIE* 1990;1202 Laser-Tissue Interaction:205-13.
130. Roider J, Hillenkamp F, Flotte T, Birngruber R. Microphotocoagulation: Selective effects of repetitive short laser pulses. *Proc Natl Acad Sci USA,* 1993;90(18):8643-7.
131. Ogata N, Ando A, Uyama M, Matsumura M. Expression of cytokines and transcription factors in photocoagulated human retinal pigment epithelial cells. *Graefes Arch Clin Exp Ophthalmol,* 2001;239(2):87-95.
132. Ogata N, Tombran-Tink J, Jo N, Mrazek D, Matsumura M. Upregulation of pigment epithelium-derived factor after laser photocoagulation. *Am J Ophthalmol,* 2001;132(3):427-9.

133. Wilson AS, Hobbs BG, Shen WY, Speed TP, Schmidt U, Begley CG, Rakoczy PE. Argon laser photocoagulation-induced modification of gene expression in the retina. *Invest Ophthalmol Vis Sci,* 2003;44(4):1426-34.
134. Barak A, Goldkorn T, Morse LS. Laser induces apoptosis and ceramide production in human retinal pigment epithelial cells. *Invest Ophthalmol Vis Sci,* 2005;46(7):2587-91.
135. Chan-Ling T, Baxter L, Afzal A, Sengupta N, Caballero S, Rosinova E, Grant MB. Hematopoietic stem cells provide repair functions after laser-induced bruch's membrane rupture model of choroidal neovascularization. *Am J Pathol,* 2006;168(3):1031-44.
136. Harris JR, Brown GA, Jorgensen M, Kaushal S, Ellis EA, Grant MB, Scott EW. Bone marrow-derived cells home to and regenerate retinal pigment epithelium after injury. *Invest Ophthalmol Vis Sci,* 2006;47(5):2108-13.
137. Binz N, Graham CE, Simpson K, Lai YK, Shen WY, Lai CM, Speed TP, Rakoczy PE. Long-term effect of therapeutic laser photocoagulation on gene expression in the eye. *FASEB J,* 2006;20(2):383-5.
138. Ricci F, Pucci S, Sesti F, Missiroli F, Cerulli L, Giusto Spagnoli, L. Modulation of Ku70/80, Clusterin/ApoJ Isoforms and Bax Expression in Indocyanine-Green-Mediated Photo-Oxidative Cell Damage. *Ophthalmic Res,* 2007;39:164–173.
139. Flaxel C, Bradle J, Acott T, Samples JR. Retinal pigment epithelium produces matrix metalloproteinases after laser treatment. *Retina,* 2007;27(5):629-34.120.
140. Colome J, Ruiz-Moreno JM, Montero JA, Fernandez E. Diode laser-induced mitosis in the rabbit retinal pigment epithelium. *Ophthalmic Surg Lasers Imaging,* 2007;38(6):484-90.
141. Wang HC, Brown J, Alayon H, Stuck BE. Transplantation of quantum dot-labelled bone marrow-derived stem cells into the vitreous of mice with laser-induced retinal injury: Survival, integration and differentiation. *Vision Res,* 2010;50(7):665-73.
142. Zhuravleva ES, Saburina IN, Borzenok SA, Doga AV, Kosheleva NV, Kachalina GF, Magaramov DA, Tonaeva Kh D. [Experimental study of safety in application of the IRIS Medical IQ 810 diode laser in clinical treatment of age-related macular degeneration]. *Patol Fiziol Eksp Ter,* 2011;(3):16-20.
143. Yu AK, Merrill KD, Truong SN, Forward KM, Morse LS, Telander DG: The comparative histologic effects of subthreshold 532- and 810-nm diode micropulse laser on the retina. *Invest Ophthalmol Vis Sci,* 2013;54(3):2216-2224.
144. De Cilla S, Vezzola D, Farruggio S, Vujosevic S, Clemente N, Raina G, Mary D, Casini G, Rossetti L, Avagliano L, Martinelli C, Bulfamante G, Grossini E. The subthreshold micropulse laser treatment of the retina restores the oxidant/antioxidant balance and counteracts programmed forms of cell death in the mice eyes. *Acta Ophthalmol*, 2019;97(4):e559-e567.

Posters and Podium Presentations

145. Kaushal S, Afzal A, Annamalai M, Neeley A, Caballero S, Chan-Ling T, Grant MB. Expression studies of laser-induced RPE stress. *Invest Ophthalmol Vis Sci,* 2008;49:ARVO E-Abstract 3987.
146. Kaushal S, Afzal A, Ko H, Neeley A, Grant M, Anamalai M. Upregulation of the stem cell chemoattractant SDF-1 by laser or heat shock to the RPE. 26th Meeting of the Club Jules Gonin, September 2008, St. Moritz, Switzerland. Abstract 102.
147. Miura Y, Treumer F, Klettner A, Hillenkamp J, Brinkmann R, Birngruber R, Roider J. VEGF and PEDF secretions over time following various laser irradiations on an RPE organ culture. *Invest Ophthalmol Vis Sci,* 2010;51:ARVO E-Abstract 469.
148. Ricci FU, Mazzarelli P, Zonetti MJ, Missiroli F, Jr., Cesareo M, Sr., Pucci S. 810 nm micropulse laser irradiation selectively regulates VEGF165 isoforms expression acting on RNA binding splice factor activation in indocyanine green loaded ARPE19 and Caco2 cultured cells. *Invest Ophthalmol Vis Sci,* 2010;51(5):56.

RETINA: TISSUE-SPARING RELATED LITERATURE

Articles

149. Sliney DH, Marshall J. Tissue specific damage to the retinal pigment epithelium: Mechanisms and therapeutic implications. *Laser Light in Ophthalmol,* 1992;5(1):17-28.
150. Berger JW. Thermal modelling of micropulsed diode laser retinal photocoagulation. *Laser Surg Med,* 1997; 20(4):409-15.
151. Mainster MA. Decreasing retinal photocoagulation damage: Principles and techniques. *Semin Ophthalmol,* 1999;14(4):200-9.
152. Lanzetta P, Dorin G, Piracchio A, Bandello F. Theoretical bases of non-ophthalmoscopically visible endpoint photocoagulation. *Semin Ophthalmol,* 2001;16(1):8-11.
153. Dorin G. Subthreshold and micropulse diode laser photocoagulation. *Semin Ophthalmol,* 2003;18(3):147-53.
154. Dorin G. Evolution of retinal laser therapy: Minimum intensity photocoagulation (MIP). Can the laser heal the retina without harming it? *Semin Ophthalmol,* 2004;19(1-2):62-68.
155. Desmettre TJ, Mordon SR, Buzawa D, Mainster MA. Micropulse and continuous-wave diode retinal photocoagulation: Visible and subvisible laser parameters. *Br J Ophthalmol,* 2006;90(6):709-12.
156. Lanzetta P, Polito A, Verritti D. Subthreshold laser. *Ophthalmology* 2008;115(1):216.e1.
157. Sivaprasad S, Elagouz M, McHugh D, Shona O, Dorin G. Micropulsed diode laser therapy: Evolution and clinical applications. *Surv Ophthalmol,* 2010;55(6):516-30.

158. Ohkoshi K, Tsuiki E, Kitaoka T, Yamaguchi T. Visualization of subthreshold micropulse diode laser photocoagulation by scanning laser ophthalmoscopy in the retro mode. *Am J Ophthalmol,* 2010;150(6):856-862.e2.
159. Youssef PN, Sheibani N, Albert DM. Retinal light toxicity. *Eye* (Lond), 2011;25(1):1-14.
160. Brader HS, Young LH. Subthreshold diode micropulse laser: A review. *Semin Ophthalmol,* 2016;31(1-2):30-9.

Posters and Podium Presentations

161. Dorin G, Arias E, Buzawa D. Evolution of laser therapy for diabetic retinopathy: Are retinal destruction and collateral adverse effects prerequisites for an effective treatment? *Invest Ophthalmol Vis Sci,* 2008;49:E-Abstract 2758.
162. Dorin G, Buzawa D, Mercereau J. Evolution of the laser treatment of diabetic retinopathy (DR): From laser surgery to laser therapy. EVER 2008, Abstract 613.
163. Dorin G. Threshold and Subthreshold Retinal Laser Therapy. But Which Threshold? *Invest Ophthalmol Vis Sci,* 2013;(53):E-Abstract 4142.

GLAUCOMA: CLINICAL

MicroPulse Laser Trabeculoplasty (MLT)
Open-Angle & Refractory Glaucomas

Articles

164. Fea Antonio Maria, Bosone A, Rolle T, Brogliatti B, Grignolo FM. Micropulse diode laser trabeculoplasty (MLT): A phase II clinical study with 12 months follow-up. *Clin Ophthalmol,* 2008;2(2):247-52. Learn more »
165. Fea Antonio Maria, Dorin G. Laser treatment of glaucoma: Evolution of laser trabeculoplasty techniques. *Techniques in Ophthalmology,* 2008;6(2):45-52.
166. Samples JR, Singh K, Lin SC, Francis BA, Hodapp E, Jampel HE, Smith SD: Laser trabeculoplasty for open-angle glaucoma: A report by the American Academy of Ophthalmology. *Ophthalmology*, 2011;118(11):2296-302. Learn more »
167. Lee JW, GS. Y, Yick DW, Yuen CY. MicroPulse laser trabeculoplasty for the treatment of open-angle glaucoma. *Medicine*, 2015;94(49):e2075. Learn more »
168. Tsang S, Cheng J, Lee JW. Developments in laser trabeculoplasty. *Br J Ophthalmol*, 2016;100(1):94-7. Learn more »
169. Abramowitz B, Chadha N, Kouchouk A, Alhabshan R, Belyea DA, Lamba T. Selective laser trabeculoplasty vs micropulse laser trabeculoplasty in open-angle glaucoma. *Clin Ophthalmol*, 2018;121599-1604.
170. Hirabayashi MT, Rosenlof TL, An JA. Comparison of successful outcome predictors for MicroPulse® laser trabeculoplasty and selective laser trabeculoplasty at 6 months. *Clin Ophthalmol*, 2019;131001-1009.
171. Hong Y, Song SJ, Liu B, Hassanpour K, Zhang C, Loewen N. Efficacy and safety of micropulse laser trabeculoplasty for primary open angle glaucoma. *Int J Ophthalmol*, 2019;12(5):784-788.
172. Makri OE, Pagoulatos D, Kagkelaris K, Plotas P, Georgakopoulos CD. Evaluation of intraocular pressure in the first 24hours after micropulse laser trabeculoplasty in eyes with pseudoexfoliation glaucoma. *J Fr Ophtalmol,* 2019;42(9):983-986.
173. Makri OE, Plotas P, Christopoulou E, Georgakopoulos CD. Effect of a single session of micropulse laser trabeculoplasty on corneal endothelial parameters. *Clin Exp Optom*, 2019.

Posters and Podium Presentations

174. Ingvoldstad DD, Krishna R, Willoughby L. Micropulse diode laser trabeculoplasty versus argon laser trabeculoplasty in the treatment of open angle glaucoma. *Invest Ophthalmol Vis Sci,* 2005;46:ARVO E-Abstract 123.
175. Saunders TC, Corrales G, Herceg MC, Camejo L, Lathrop K, Noecker RJ. Comparison of morphologic changes after sub-visiblethreshold laser (micropulse) trabeculoplasty, selective laser trabeculoplasty and argon laser trabeculoplasty in human eye bank eyes. American Glaucoma Society, 18th Annual Meeting. 2008.
176. Melis R, Pilotto E, Vujosevic S, Dorigo MT, Midena E. Micropulse diode laser trabeculoplasty for secondary corticosteroid induced glaucoma. EVER 2008, Abstract 5356. Learn more »
177. Iwach AG. Micropulse laser. Overview of micropulse diode laser trabeculoplasty: What we know and don't know. AAO 2008, Atlanta, GA. Glaucoma 2008 Subspecialty Day, Pages 17-18.
178. Coombs P, Radcliffe NM: Outcomes of micropulse laser trabeculoplasty vs. selective laser trabeculoplasty. *Invest Ophthalmol Vis Sci,* 2014;(55):E-Abstract 6155. Learn more »
179. Arcieri ES, Arcieri RS: Micropulse diode laser trabeculoplasty results in treatment of primary open-angle glaucoma patients. *Invest Ophthalmol Vis Sci,* 2014;(55):E-Abstract 6165. Learn more »
180. Modi KK, Walsman SM. Effect of increasing shot number in micropulse laser trabeculoplasty (MLT) for open angle glaucoma. *Invest Ophthalmol Vis Sci*, 2017;58(8):4976-4976.
181. Dios JA, Delgado M, Castro V. Micropulse laser trabeculoplasty in advanced glaucoma. World Glaucoma Conference. 2017. Helsinki.
182. Deng T, Dooner K, Noorani S, Yang A, Huet B, Li X, AlSalem MMA. MLT (micropulse laser trabeculoplasty) or not? American Glaucoma Society, 2018, New York City, NY.
183. Dionisio RG, German OL, Patrianakos T, Giovingo M. MLT vs SLT in the hispanic and african american population for treatment of open-angle glaucoma. *Invest Ophthalmol Vis Sci,* 2018;59(9):6097-6097.
184. Gapsis BC, Bickford M, Sharpe RA, Das S, Kammerdeiner L, Nutaitis MJ. Analysis of the relative efficacy of micropulse laser trabeculoplasty and selective laser trabeculoplasty. *Invest Ophthalmol Vis Sci,* 2018;59(9):6090-6090.
185. Sun CQ, Ou Y. Comparison of outcomes of micropulse laser trabeculoplasty versus selective laser trabeculoplasty. *Invest Ophthalmol Vis Sci,* 2018;59(9):6089-6089.
186. Clemente A, Toma C, Vujosevic S, Padovan C, de Cillà S. Efficacy of micropulse laser trabeculoplasty in open angle glaucoma. *Invest Ophthalmol Vis Sci,* 2019;60(9):696-696.
187. Sun CQ, Ou Y. Outcomes of micropulse laser trabeculoplasty versus selective laser trabeculoplasty. American Glaucoma Society 29th Annual Meeting. 2019. San Francisco, CA.
188. Thomas C, Darwish D, Giovingo M, Mannina A. Post-operative one hour intraocular pressure spikes and long term pressure efficacy in micropulse laser trabeculoplasty (MLT) vs selective laser trabeculoplasty (SLT). *Invest Ophthalmol Vis Sci*, 2019;60(9):697-697.

MicroPulse Transscleral Laser Therapy (TLT)
Open-Angle & Refractory Glaucomas

Articles

189. Tan A, Chockalingam M, Aquino M, Lim Z, See J, Chew P. Micropulse transscleral diode laser cyclophotocoagulation in the treatment of refractory glaucoma. *Clin Exp Ophthalmol,* 2010;38(3):266-72. Learn more »
190. Aquino MC, Barton K, Tan AM, Sng C, Li X, Loon SC, Chew PT. Micropulse versus continuous wave transscleral diode cyclophotocoagulation in refractory glaucoma: A randomized exploratory study. *Clin Exp Ophthalmol,* 2015;43(1):40-6. Learn more »
191. Kuchar S, Moster MR, Reamer CB, Waisbour M. Treatment outcomes of micropulse transscleral cyclophotocoagulation in advanced glaucoma. *Lasers Med Sci* ,2016;(31):393-396. Learn more »
192. Toyos MM, Toyos R. Clinical outcomes of micropulsed transcleral cyclophotocaogulation in moderate to severe glaucoma. *J Clin Exp Ophthalmol,* 2016;7(6):1-3.
193. Emanuel ME, Grover DS, Fellman RL, Godfrey DG, Smith O, Butler MR, Kornmann HL, Feuer WJ, Goyal S. Micropulse cyclophotocoagulation: Initial results in refractory glaucoma. *J Glaucoma*, 2017;26(8):726-729. Learn more »
194. Lee JH, Shi Y, Amoozgar B, Aderman C, De Alba Campomanes A, Lin S, Han Y. Outcome of micropulse laser transscleral cyclophotocoagulation on pediatric versus adult glaucoma patients. *J Glaucoma*, 2017;26(10):936-939. Learn more »
195. Williams AL, Moster MR, Rahmatnejad K, Resende AF, Horan T, Reynolds M, Yung E, Abramowitz B, Kuchar S, Waisbourd M. Clinical efficacy and safety profile of micropulse transscleral cyclophotocoagulation in refractory glaucoma. *J Glaucoma,* 2018;27(5):445-449. Learn more »
196. Abdelrahman AM, El Sayed YM. Micropulse versus continuous wave transscleral cyclophotocoagulation in refractory pediatric glaucoma. *J Glaucoma*, 2018;27(10):900-905.
197. Barac R, Vuzitas M, Balta F. Choroidal thickness increase after micropulse transscleral cyclophotocoagulation. *Romanian J Ophthalmol*, 2018;62(2):144-148.
198. Gavris MM, Olteanu I, Kantor E, Mateescu R, Belicioiu R. Iridex MicroPulse P3: Innovative cyclophotocoagulation. *Romanian J Ophthalmol*, 2017;61(2):107-111.
199. Aquino MC, Lim D, Chew PT. Micropulse P3™ (MP3) laser for glaucoma: An innovative therapy. *Journal of Current Glaucoma Practice*, 2018;12(2):51-52.
200. Sanchez FG, Lerner F, Sampaolesi J, Noecker R, Becerra N, Iribarren G, Grippo TM. Efficacy and safety of MicroPulse® transscleral cyclophotocoagulation in glaucoma. *Arch Soc Esp Oftalmol*, 2018;93(12):573-579.
201. Sarrafpour S, Saleh D, Ayoub S, Radcliffe NM. Micropulse transscleral cyclophotocoagulation: A look at long term effectiveness and outcomes. *Ophthalmology Glaucoma*, 2019;2167-171.
202. Yelenskiy A, Gillette TB, Arosemena A, Stern AG, Garris WJ, Young CT, Hoyt M, Worley N, Zurakowski D, Ayyala RS. Patient outcomes following micropulse transscleral cyclophotocoagulation: Intermediate-term results. *J Glaucoma*, 2018;27(10):920-925.
203. Al Habash A, AlAhmadi AS. Outcome of MicroPulse® transscleral photocoagulation in different types of glaucoma. *Clinical Ophthalmology* (Auckland, N.Z.), 2019;(13):2353-2360.
204. Awoyesuku EA, Fiebai F. Outcome of micropulse laser in treatment of open angle glaucoma in a peripheral hospital in rivers state, nigeria: Our initial experience. *Journal of Advances in Medicine and Medical Research*, 2019;29(2):1-7.
205. Jammal AA, Costa DC, Vasconcellos JPC, Costa VP. Prospective evaluation of micropulse transscleral diode cyclophotocoagulation in refractory glaucoma: 1 year results. *Arq Bras Oftalmol*, 2019;82(5):381-388.
206. Magacho L, Lima FE, Avila MP. Double-session micropulse transscleral laser (Cyclo G6) as a primary surgical procedure for glaucoma. *J Glaucoma*, 2019.
207. Magacho L, Lima FE, Avila MP. Double-session micropulse transscleral laser (Cyclo G6) for the treatment of glaucoma. *Lasers Med Sci*, 2019.
208. Nguyen AT, Maslin J, Noecker RJ. Early results of micropulse transscleral cyclophotocoagulation for the treatment of glaucoma. *Eur J Ophthalmol*, 2019;1120672119839303.
209. Souissi S, Baudouin C, Labbe A, Hamard P. Micropulse transscleral cyclophotocoagulation using a standard protocol in patients with refractory glaucoma naive of cyclodestruction. *Eur J Ophthalmol*, 2019;1120672119877586.
210. Subramaniam K, Price MO, Feng MT, Price FW, Jr. Micropulse transscleral cyclophotocoagulation in keratoplasty eyes. *Cornea*, 2019;38(5):542-545.
211. Varikuti VNV, Shah P, Rai O, Chaves AC, Miranda A, Lim BA, Dorairaj SK, Sieminski SF. Outcomes of micropulse transscleral cyclophotocoagulation in eyes with good central vision. *J Glaucoma*, 2019;28(10):901-905.
212. Zaarour K, Abdelmassih Y, Arej N, Cherfan G, Tomey KF, Khoueir Z. Outcomes of micropulse transscleral cyclophotocoagulation in uncontrolled glaucoma patients. *J Glaucoma*, 2019;28(3):270-275.

Posters and Podium Presentations

213. Aquino MCD, Tan AM, Loon SC, Chew PT. Transscleral micropulse diode laser cyclophotocoagulation as effective adjunctive treatment prior to glaucoma surgery. *Invest Ophthalmol Vis Sci,* 2012;(53):E-Abstract 5962. Learn more »
214. Radcliffe N, Vold S, Kammer JA, Ahmed IK, Parekh PD, Noecker RJ, Khatana A. MicroPulse trans-scleral cyclophotocoagulation (mTSCPC) for the treatment of glaucoma using the MicroPulse P3 device. American Glaucoma Society. 2015. Coronado, CA.
215. Aquino M, Chew P. Long-term efficacy of micropulse diode transscleral cyclophotocoagulation in the treatment of refractory glaucoma. European Glaucoma Society, 2016.
216. Fesende AF, Waisbourd M, Amarasekera D, Hark LA, Moster MR. A prospective pilot study evaluating the novel micropulse transscleral cyclophotocoagulation: Short-term results. American Glaucoma Society, 2016. Ft. Lauderdale, FL.
217. Lin S, Babi K, Masis M. Micropulse transscleral diode laser cyclophotocoagulation: Short term results and anatomical effects. American Glaucoma Society, 2016.
218. Maslin J, Noecker RJ. Micropulse trans-scleral cyclophotocoagulation for the treatment of glaucoma. *Invest Ophthalmol Vis Sci*, 2016;57:ARVO E-Abstract 6478.
219. Masis M, Lin S, Babic K. Micropulse transscleral diode laser cyclophotocoagulation: Mid to long-term results. American Glaucoma Society. 2017. Coronado, CA. Learn more »
220. Radhakrishnan S, Wan J, Tran B, Thai A, Hernandez-Siman J, Nguyen N, Pickering TC, Tanaka G, Lieberman M, Wong P, Iwach A. Outcomes of micropulse cyclophotocoagulation: A multicenter review. Amer. Glaucoma Soc. 2017. Coronado, CA. Learn more »
221. Shazly T, Loewen N, Polat J, Conner I. Outcomes of micropulse transscleral cyclophotocoagulation in medically uncontrolled glaucoma. American Glaucoma Society. 2017. Coronado, CA.
222. Toeteberg-Harms M, Funk J, Jurjevic D. Micro-pulse cyclophotocoagulation reduces IOP faster compared to G-Probe-cyclophotocoagulation. American Glaucoma Society. 2017. Coronado, CA. Learn more »
223. Werner A, Mattox CG, Hansen B, Elfersy A. Outcomes in micropulse transscleral diode cyclophotocoagulation for treatment of refractory glaucoma. American Glaucoma Society. 2017. Coronado, CA.
224. Patel K, Gelinas N, Rafay H, patrianakos t, Giovingo M. The effects of micropulse transscleral cyclophotocoagulation versus traditional transscleral cyclophotocoagulation diode on intraocular pressure in primary open angle glaucoma. *Invest Ophthalmol Vis Sci*, 2017;58(8):4991-4991.
225. Huang P, McKnight B, Akil H, Huang AS, Francis BA. Efficacy and safety of MicroPulse transscleral diode laser cyclophotocoagulation in the treatment of refractory glaucoma. *Invest Ophthalmol Vis Sci,* 2017;58(8):4997-4997. Learn more »
226. Khan FH, Pikey K, Krishna R. The micropulse cyclophotocoagulation technique can be a safe and effective treatment for patients with refractory glaucoma. *Invest Ophthalmol Vis Sci,* 2017;58(8):4992-4992.
227. Zhou D, Mas-Ramirez AM, Siegel MJ. Micropulse cyclophotocoagulation: Patients' perceived pain score. *Invest Ophthalmol Vis Sci*, 2017;58(8):4994-4994. Read more »
228. Aquino MCD, Chew P. Early outcome of combined micropulse cyclophototherapy and cataract surgery in the treatment of refractory glaucoma. World Glaucoma Conference. 2017. Helsinki.
229. Lima F, Avila M. Micropulse transscleral cyclophotocoagulation after endoscopic cyclophotocoagulation failure in refractory glaucoma. World Glaucoma Conference. 2017. Helsinki.
230. Sriphon P, Sayawat S. Efficacy of micropulse transcleral cyclophotocoagulation in uncontrolled glaucoma at Srinagarind Hospital, Thailand. World Glaucoma Conference, 2017. Helsinki.
231. Masis M, Nguyen A, Gonzalez MM, SC L. Pupillary mydriasis and recovery after transscleral micropulse cyclophotocoagulation. American Glaucoma Society, 2018, New York City, NY. Learn more »
232. Bohnak CE, Aey JP. Micropulse transscleral cyclophotocoagulation in the treatment of patients with primarily severe stage glaucoma. American Society of Cataract & Refractive Surgery, 2018, Washington, DC. Learn more »
233. Breshears BM. Two-year retroactive study of G6 transscleral cyclophotocoagulation as a secondary poag treatment. American Society of Cataract & Refractive Surgery, 2018, Washington, DC. Learn more »
234. Nguyen D, Giovingo MC, Patrianakos TD, Patel K, Breshears BM. Micropulse transscleral cyclophotocoagulation as a primary intervention in primary open-angle glaucoma patients. American Society of Cataract & Refractive Surgery, 2018, Washington, DC. Learn more »
235. Patel K, Breshears BM, Nguyen D, Patrianakos TD, MC G. Effects of micropulse transscleral cyclodiode laser on secondary open-angle glaucoma. American Society of Cataract & Refractive Surgery. 2018. Washington, DC. Learn more »
236. Altan C, Satana B, Basarir B, Pasaoglu I, Yasa T. Early clinical outcomes of micropulsed transcleral cyclophotocoagulation in open angle glaucoma. European Glaucoma Society, 2018, Florence, Italy.
237. Goenadi CJ, D'Aquino MD, L MS, Chew PTK. Early outcomes of micropulse diode transscleral cyclophototherapy for treatment of mild to moderate glaucoma. European Glaucoma Society, 2018, Florence, Italy. Learn more »
238. Zbiba W, Sayadi S, Bouayed E, Elleuch I, Kharrat M. Micropulsed transcleral cyclophotocoagulation in glaucoma management: The tunisian experience. European Glaucoma Society, 2018, Florence, Italy. Learn more »

239. Amoozgar B, Feinstein M, Lee JH, Liu K, Porco T, Stewart JM, Han Y. Micropulse transscleral cyclophotocoagulation or MP-TCP vs endoscopic cyclophotocoagulation-plus or ECP-plus. *Invest Ophthalmol Vis Sci*, 2018;59(9):6101-6101. Learn more »
240. Ayoub S, Sarrafpour S, Radcliffe NM. Long-term outcomes of micropulse cyclophotocoagulation in eyes with and without prior tube shunt surgery. *Invest Ophthalmol Vis Sci,* 2018;59(9):6104-6104.
241. Lee JH, Amoozgar B, Lin SC, Padmanabhan S. Short term outcomes of micropulse transscleral cyclophotocoagulation in an urban public hospital. *Invest Ophthalmol Vis Sci*, 2018;59(9):6108-6108.
242. Aihara M, Fujishiro T, Honjo M, Igarashi N, Koichiro Su, Sakata R. IOP reduction and morphological changes of ciliary body by micropulse transscleral cyclophotocoagulation. World Glaucoma Conference, 2018, Barcelona, Spain. Learn more »
243. Ghazal K. Early result of micro pulse cyclophotocoagulation in glaucoma cases resistant to medication. World Glaucoma Conference, 2018, Barcelona, Spain. Learn more »
244. Massad II. No more blades, scars or scares: A one year experience of micropulse trans-scleral cyclophotocoagulation from middle east. World Glaucoma Conference, 2018, Barcelona, Spain. Learn more »
245. Aguado BR, Cortes LA, Arroyo IL, Asaad M. Transscleral cyclophotocoagulation with diode laser for refractory glaucoma. Our experience. European Glaucoma Society, 2018.
246. Asano S, Aihara M, Fujishiro T, Honjo M, Igarashi N, Koichiro S, Sakata R. IOP reduction and morphological changes of ciliary body by micropulse transscleral cyclophotocoagulation. World Ophthalmology Congress, 2018.
247. Agudelo N. Initial outcomes of mycropulse transscleral cyclophtocoagulation in patients with glaucoma and penetrating keratoplasty or boston keratoprosthesis. World Glaucoma Conference. 2019. Melbourne, Australia.
248. Basarir B, Altan C, Solmaz B, Pasaglu I, Alagoz N, Yasar T. Long-term clinical outcomes of micropulsed transcleral cyclophotocoagulation in open-angle glaucoma. European Society of Cataract and Refractive Surgery 2019.
249. Breshears B, Patrianakos TD, Giovingo M. Three-year retrospective study of treatment with micropulse cyclophotocoagulation as a primary procedure for neovascular glaucoma. *Invest Ophthalmol Vis Sci*, 2019;60(9):704-704.
250. Butler MR, Gregston AP, Sanchez W, Feuer WJ, Grover DS. Transscleral micropulse versus diode cyclophotocoagulation in eyes with a failed tube shunt. American Glaucoma Society, 2019.
251. Chen H. Novel micropulse transscleral cyclophotocoagulation: Initial results in glaucoma. World Glaucoma Conference. 2019. Melbourne, Australia.
252. Chhaya SG, Kagathi M, Manipur S. Clinical outcome of micropulse transscleral cyclophotocoagulation in indian glaucoma patients: Pilot study. World Glaucoma Conference. 2019. Melbourne, Australia.
253. Chung J, Jung JJ, Yoo YC. Short-term outcomes of MicroPulse trans-scleral cyclophotocoagulation in Korean patients. *Invest Ophthalmol Vis Sci*, 2019;60(9):699-699.
254. Daas A, Nagar A, Ho H, Amon A, Versi I, Gadhvi K, Lim S. Early results of phacoemulsification combined with micropulse cyclodiode laser in patients with glaucoma: Efficacy and safety. European Society of Cataract and Refractive Surgery, 2019, Paris.
255. Del Hierro C, Alvarez Ascencio D, Prado Larrea C, Jimenez Roman J. Micropulse transscleral cyclophotocoagulation in refractory glaucoma. 6 month follow-up. *Invest Ophthalmol Vis Sci*, 2019;60(9):700.
256. Guballa RA, Cruz JM. Treatment outcomes of micropulse transscleral cyclophotocoagulation in refractory glaucoma patients in a tertiary government hospital. World Glaucoma Conference. 2019. Melbourne, Australia.
257. Ibrahim L, Chaves A, Kanadani T, Dorairaj S, Prata T, Kanadani F. Intraocular pressure reduction profile in patients with refractory glaucoma submitted to micropulse transscleral cyclophotocoagulation. *Invest Ophthalmol Vis Sci*, 2019;60(9):705-705.
258. Ibrahim LF, Chaves AC, Kanadani TM, Dorairaj S, Prata TS, Kanadani FN. Intraocular pressure reduction profile in patients with refractory glaucoma submitted to micropulse transscleral cyclophotocoagulation. *Invest Ophthalmol Vis Sci,* 2019;60(9):705-705.
259. Kaba Q, Tam E, Somani S, Yuen D. Efficacy and safety of micropulse cyclophotocoagulation for patients with ocular hypertension and glaucoma. European Society of Cataract and Refractive Surgery, 2019, Paris.
260. Liehneova I, Karlovska S. Micropulse transscleral cyclophotocoagulation in controlled primary open angle glaucoma by medication. World Glaucoma Conference. 2019. Melbourne, Australia.
261. Macasaet AM, Wong K, Koh V, Aquino MC, Chew P. MP3 plus: A modified micropulse transscleral cyclophotocoagulation technique for the treatment of refractory glaucoma. World Glaucoma Conference. 2019. Melbourne, Australia.
262. Parkhomenko O, Parkhomenko G, Parkhomenko O, Kovalenko A. Safety and efficacy of combined transscleral micropulse diode laser cyclocoagulation with phacoemulsification and intraocular lens implantation. European Society of Cataract and Refractive Surgery, 2019, Paris.
263. Rapista AJ, Lee PR, Nasol MCC. Micropulse cyclophotocoagulation outcomes in filipino patients with refractory glaucoma. World Glaucoma Conference. 2019. Melbourne, Australia.
264. Reiser BJJ. The efficacy and safety of micropulse photocyclophotocoagulation in the treatment of refractory advanced pediatric glaucomas. *Invest Ophthalmol Vis Sci*, 2019;60(9):703-703.

265. Samir A, AlQarni A, Almalis M. Micropulse transscleral cyclophotocoagulation for the management of glaucoma after silicone oil removal in vitrectomized eyes. European Society of Cataract and Refractive Surgery, 2019, Paris.
266. Thawongklang S, Sayawat N. Efficacy of micropulse transcleral cyclophotocoagulation in uncontrolled glaucoma at srinagarind hospital, thailand: 1-year result. World Glaucoma Conference. 2019. Melbourne, Australia.
267. Vincent LR, Siddiqui M, Kay D, Planchard B, Waldman C. Outcomes of MicroPulse transscleral cyclophotocoagulation versus Ahmed glaucoma valve as initial surgical treatment for neovascular glaucoma. American Glaucoma Society, 2019.
268. Vu V, Hui Lee J, Lazcano G, Han K, Rose-Nussbaumer J, Schallhorn J, Hwang D, Y H. Clinical outcomes of MicroPulse transscleral cyclophotocoagulation on patients with history of keratoplasty. American Glaucoma Society, 2019.
269. Waibel S, Herber R, Pillunat LE, Pillunat KR. Pars plicata versus pars plana application of micropulse transscleral cyclophotocoagulation. *Invest Ophthalmol Vis Sci*, 2019;60(9):706-706.
270. Vincent L, Kheirkhah A, Planchard B, Waldman C. Outcomes of micropulse transscleral cyclophotocoagulation in a hispanic population. *Invest Ophthalmol Vis Sci*, 2019;60(9):3765-3765.
271. Weed J, Shazly TA, Conner IP. Three-year outcomes of micropulse trans-scleral cyclophotocoagulation in medically uncontrolled glaucoma. American Academy of Ophthalmology. 2019. San Francisco, CA.
272. Yamamoto R, Fujishiro T, Sugimoto K, Asano S, Shimizu K, Murata H, Sakata R, Asaoka R, Honjo M, Aihara M. The efficacy and safety of micropulse transscleral cyclophotocoagulation (MP-CPC) in Japanese refractory glaucoma. World Glaucoma Conference. 2019. Melbourne, Australia.

GLAUCOMA: PRE-CLINICAL

MicroPulse Laser Trabeculoplasty (MLT)

Posters and Podium Presentations

273. Grzybowski DM, Kim B, Roberts CJ, Weber PA. Cytokine & MMP production after CW and micropulse diode laser irradiation in responsive vs non-responsive cultured human trabecular meshwork endothelial cells (TMEC). *Invest Ophthalmol Vis Sci*, 2007;48:ARVO E-Abstract 2068. Learn more »
274. Fudemberg SJ, Myers JS, Katz LJ. Trabecular meshwork tissue examination with scanning electron microscopy: A comparison of micropulse diode Laser (MLT), selective laser (SLT), and argon laser (ALT) trabeculoplasty in human cadaver tissue. *Invest Ophthalmol Vis Sci*, 2008;49:E-Abstract 1236. Learn more »
275. Kim B, Grzybowski DM, Mahmoud AM, Weber PA, Roberts C. Heat shock protein expression following micropulse and continuous wave diode laser irradiation of cultured human trabecular meshwork endothelial cells. *Invest Ophthalmol Vis Sci,* 2008;49:ARVO E-Abstract 1632. Learn more »
276. Wingard JB, Miller KV, Pokabla MJ, Strunk KM, Gray JL, Bentivegna R, Noecker RJ. Comparison of morphologic changes after continuous and micropulse yellow laser trabeculoplasty by scanning electron microscopy. American Society of Cataract and Refractive Surgery, Poster. 2011 San Diego, CA. Learn more »
277. Johnstone TM. Collector channel entrances dynamically close & open in humans as imaged by OCT: Consideration in migs selection and placement? American Glaucoma Society, 2018, New York City, NY. Learn more »

MicroPulse Transscleral Laser Therapy (TLT)

Posters and Podium Presentations

278. Johnstone MA, Padilla S, Wen K. Transcleral laser, ciliary muscle shortening & outflow pathway reorganization. *Invest Ophthalmol Vis Sci*, 2017;58(8):3468-3468. Learn more »
279. Johnstone MA, SONG S, Padilla S, Wen K, Xin C, Wen JC, Martin E, Wang RK. Microscope real-time video (mrtv), high- resolution OCT (HR-OCT) & histopathology (HP) to assess how transcleral micropulse laser (TML) affects the sclera, ciliary body (CB), muscle (CM), secretory epithelium (CBSE), suprachoroidal space (SCS) & aqueous outflow system. *Invest Ophthalmol Vis Sci*, 2019;60(9):2825-2825.
280. Moussa K, Pekmezci M, Feinstein M, Ammozgar BBA, Bloomer M, Oldenburg C. Histologic changes following continuous and micropulse transscleral cyclophotocoagulation: A comparative study. American Glaucoma Society, 2018, New York City, NY. Learn more »
281. Maslin J, Chen P, Sinard J, Noecker R. Comparison of acute histopathological changes in human cadaver eyes after MicroPulse and continuous wave trans-scleral cyclophotocoagulation. American Glaucoma Society. 2016. San Francisco, CA.
282. Johnstone MA, Padilla S, Song S, Xin Ch, Wen JC, Martin E, Wang R. Transcleral micropulse laser (TML) effects on outflow system, sclera, ciliary muscle (CB) & suprachoroidal space (SCS): Insights from high-resolution OCT (HROCT), real-time video (RTV) & histology. American Glaucoma Society, 2019. San Francisco, CA.
283. Zhao M, Pekmezci M, Lee RK, Han Y. Histologic changes following continuous wave and micropulse transscleral cyclophotocoagulation: A randomized comparative study. American Glaucoma Society, 2019. San Francisco, CA.

GLAUCOMA: MULTI-STUDY REVIEWS & RELATED LITERATURE

Articles

284. Amoozgar B, Phan EN, Lin SC, Han Y. Update on ciliary body laser procedures. *Curr Opin Ophthalmol*, 2017;28(2):181-186.
285. Ma A, Yu SWY, Wong JKW. Micropulse laser for the treatment of glaucoma: A literature review. *Surv Ophthalmol*, 2019;64(4):486-497.

Posters and Podium Presentations

286. Grisham E, Hooshmand S, An JA. Outcomes of MicroPulse cyclophotocoagulation in adult glaucoma patients. *Invest Ophthalmol Vis Sci*, 2019;60(9):702-702.

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