


**ISCO3 compilation of the papers published on the use of O<sub>2</sub>/O<sub>3</sub> in the treatment /prevention/recovery of COVID-19.**  
All papers are available in the ISCO3 Free on-line library [https://www.zotero.org/groups/46074/isco3\\_ozone/library](https://www.zotero.org/groups/46074/isco3_ozone/library)  
**Original papers with OUTCOMES (new entry are highlighted in red):**

I. Factor	Paper
3.943	[9 patients vs 9 control, MAH 200 mL: 40 µg/mL 2 a day for 4 days; shorter mean time to clinical improvement] 1. Alberto Hernández, Montserrat Viñals, Asunción Pablos, Francisco Vilás, Peter J Papadakos, Duminda N Wijeyesundera, Sergio D Bergese, Marc Vives. Ozone therapy for patients with COVID-19 pneumonia: Preliminary report of a prospective case-control study. <i>Int Immunopharmacology</i> 2021, 90: 10726. CLINICAL TRIAL REGISTRATION NUMBER: NCT04444531. <a href="https://www.sciencedirect.com/science/article/pii/S1567576920337280">https://www.sciencedirect.com/science/article/pii/S1567576920337280</a>
3.943 Med Line	[30 patients vs 30 control, RIO3 150 mL 40 µg/mL 2 a day + MIAH 3 blood + 5 mL O <sub>3</sub> 25 µg/mL for 10 days] 2. Mili Shah, Jignasha Captain, Vidyadhar Vaidya, Arvind Kulkarni, Kedar Valsangkar, Pradeep M K Nair, Gayatri Ganu. Safety and efficacy of ozone therapy in mild to moderate COVID-19 patients: A phase I/II randomized control trial (SEOT study). <i>Int Immunopharmacol</i> 2020 Dec 23;91:107301. doi: 10.1016/j.intimp.2020.107301. <a href="https://pubmed.ncbi.nlm.nih.gov/33421928/">https://pubmed.ncbi.nlm.nih.gov/33421928/</a>
3.943 Med Line	[48 patients vs 44 control, MIAH 200 blood + O <sub>3</sub> 40 µg/mL for 3 days] 3. Emanuela Sozio, Amato De Monte, Giovanni Sermann, Flavio Bassi, Davide Sacchet, Francesco Sbrana, Andrea Ripoli, Francesco Curcio, Martina Fabris, Stefania Marengo, Daniele Italiani, Daniela Luciana Bocalatte-Rosa, Carlo Tascini, CORMOR study Group. CORonavirus-19 mild to moderate pneumonia Management with blood Ozonization in patients with Respiratory failure (CORMOR) multicentric prospective randomized clinical trial. <i>Int Immunopharmacol</i> . 2021 Jun 12;98:107874. doi: 10.1016/j.intimp.2021.107874. <a href="https://pubmed.ncbi.nlm.nih.gov/34186281/">https://pubmed.ncbi.nlm.nih.gov/34186281/</a>
3.380 Cite Score: 5.1 Med Line	[Series Case (50 cases), Mayor Auto hemotherapy 100-200 mL, 45 µg/mL, 5 sessions] 4. Marianno Franzini, Luigi Valdenassi, Giovanni Ricevuti, Salvatore Chirumbolo, Markus Depfenhart, Dario Bertossi, Umberto Tirelli. Oxygen-ozone (O <sub>2</sub> -O <sub>3</sub> ) immunocellular therapy for patients with COVID-19. Preliminary evidence reported. <i>International Immunopharmacology</i> . 2020 August 8, 88: 106879. <a href="https://pubmed.ncbi.nlm.nih.gov/32795898/">https://pubmed.ncbi.nlm.nih.gov/32795898/</a>
2.322 Med Line	[30 patients treated with MAH 200 mL O <sub>3</sub> 200 mL 40 µg/mL vs control group n=30 / Improvement was found] 5. Carlo Tascini, Giovanni Sermann, Alberto Pagotto, Emanuela Sozio, Chiara De Carlo, Alessandro Giacinta, Francesco Sbrana, Andrea Ripoli, Nadia Castaldo, Maria Merelli, Barbara Cadeo, Cristiana Macor, Amato De Monte. Blood ozonization in patients with mild to moderate COVID-19 pneumonia: a single centre experience. <i>Internal and Emergency Medicine</i> . 2020 Nov. 1 <a href="https://doi.org/10.1007/s11739-020-02542-6">https://doi.org/10.1007/s11739-020-02542-6</a>
2.8	[18 cases, 2 mayor auto hemotherapy a day for 4 days. Full text available in ISCO3 library]. 6. Hernández A, Viñals M, Pablos A, Vilás F, Papadakos PJ, et al. (2020) Ozone Therapy for Patients with SARS-COV-2 Pneumonia: A Single-Center Prospective Cohort Study. <i>Insights Biomed</i> Vol.5 No.4:13
2.049 H index 111 Cite Score: 4	[Case Report (2 cases)] 7. Z, Zheng, Dong M, and Hu K. 'A Preliminary Evaluation on the Efficacy of Ozone Therapy in the Treatment of COVID-19'. <i>Journal of Medical Virology</i> . <i>J Med Virol</i> , 21 May 2020. <a href="https://doi.org/10.1002/jmv.26040">https://doi.org/10.1002/jmv.26040</a>
2.021	[Ozone-autohemotherapy group (14) and control group (14)] 8. Fabio Araimo, Carmela Imperiale, Paolo Tordiglione, Giancarlo Ceccarelli, Cristian Borrazzo, Francesco Alessandri, Letizia Santinelli, Giuseppe Pietro Innocenti, Claudia Pinacchio, Vera Mauro, Gregorio Egidio Recchia, Serena Zanca, Andrea Calò, Roberto Poscia, Franco Ruberto, Gabriella d'Ettore, Federico Bilotta, Claudio Mastroianni, Francesco Pugliese. Ozone as Adjuvant Support in the Treatment of COVID-19: A Preliminary Report of Probiozovid Trial. <i>J Med Virol</i> . 2020 Oct 28. doi: 10.1002/jmv.26636.
1.3 H-index 6 SJR 0.24	[Case Report (25 cases vs historical control), SSO3] 9. Schwartz A, Martínez-Sánchez G, de Lucía AM, Viana SM, Constanta AM (2021) Complementary application of the ozonized saline solution in mild and severe patients with pneumonia COVID-19: A non-randomized pilot study. <i>J Pharm Pharmacogn Res</i> 9(2): 126–142. <a href="https://ppres.com/ppres/pdf/vol9/ppres20.971.9.2.126.pdf">https://ppres.com/ppres/pdf/vol9/ppres20.971.9.2.126.pdf</a>
0.19	[Case report (1 case) Major Autohemotherapy, 100 ml 40 µg/mL for 5 consecutive days] 10. Wu, Junping; Tan, Cherie; Yu, Hongzhi; Wang, Youwei; Tian, Yutao; Shao, Wenwei; Zhang, Yifei; Zhang, Kuo; Shao, Hongxia; Ni, Guangjian; Shen, Jun; Wu, Qi and Ming, Dong. Case Report: Recovery of One ICU-Acquired COVID-19 Patient Via Ozonated Autohemotherapy (March 26, 2020). Available at SSRN: <a href="https://ssrn.com/abstract=3561379">https://ssrn.com/abstract=3561379</a> or <a href="http://dx.doi.org/10.2139/ssrn.3561379">http://dx.doi.org/10.2139/ssrn.3561379</a>
0.08	[98 Covid-19 patients was treated with ozonized saline solution. Full test in Zotero ISCO3 library] 11. Husham A. Razzaq, Mohammad S. Hasan, Muthanna F. Al-Dhalemy, Wurood M. Al-Silaykhee, Hekmat B. Alhmadi, Zaid A. Majeed. Utilization of Ozone as a Complementary Therapy for COVID-19 Patients. <i>International Journal of Psychosocial Rehabilitation</i> , 24(7), 2020. Pp. 10577-10588. DOI. 10.37200/IJPRV24I7/PR271061
0.012	[Case report, use of ozonized oil eye-drops] 12. Cosimo Mazzotta, Ermete Giancipoli. Anterior Acute Uveitis Report in a SARS-CoV-2 Patient Managed with Adjunctive Topical Antiseptic Prophylaxis Preventing 2019-nCoV Spread Through the Ocular Surface Route. <i>Int Med Case Rep J</i> . 2020 Oct 13;13:513-520. doi: 10.2147/IMCRJ.S260252. eCollection 2020.
Undetermined PubMed/PMC	[Case Report (4 cases), rectal insufflation] 13. Marcos Edgar Fernández-Cuadros, María Jesús Albaladejo-Florín, Sandra Álava-Rabasa, Isabel Usandizaga-Elio, Dolores Martínez-Quintanilla Jiménez, Daiana Peña-Lora, Inmaculada Neira-Borrajó, María Jesús López-Muñoz, Javier Rodríguez-de-Cía, and Olga Susana Pérez-Moro. Effect of Rectal Ozone (O <sub>3</sub> ) in Severe COVID-19 Pneumonia: Preliminary Results. <i>SN Compr Clin Med</i> . 2020 Aug 3: 1–9. doi: 10.1007/s42399-020-00374-1
H index 17 PubMed/PMC SCOPUS	[Case Report (3 cases)] 14. Alberto Hernández, Montserrat Viñals, Tomas Isidoro, Francisco Vilás. Potential Role of Oxygen–Ozone Therapy in Treatment of COVID-19 Pneumonia. <i>Am J Case Rep</i> . 2020 Aug 17; 21:e925849. doi: 10.12659/AJCR.925849.
CiteScore: 1.0 SNIP: 0.393 SJR: 0.190	[Case Report (1 cases), rectal insufflation] 15. Peña-Lora D, Albaladejo-Florín MJ, Fernández-Cuadros ME. Uso de Ozonoterapia en paciente anciana con neumonía grave por COVID-19 [Usefulness of rectal ozonotherapy in a geriatric patient with severe COVID-19 pneumonia]. <i>Revista Española de Geriatria y Gerontología</i> . November-December; 55(6): 362–364 (2020). doi: <a href="https://doi.org/10.1016/j.reag.2020.07.005">https://doi.org/10.1016/j.reag.2020.07.005</a>
Undetermined	[Case Report (2 cases)] 16. Schwartz, Adriana and Rosa Mª Narros. COVID-19 Dermatological manifestations. Presentation of two cases. <i>Ozone Therapy Global Journal</i> , (2020) 10(1): 27-38
Undetermined	17. Junping Wu, Cherie S. Tan, Hongzhi Yu, Youwei Wang, Yutao Tian, Wenwei Shao, Yifei Zhang, Kuo Zhang, Hongxia Shao, Guangjian Ni, Jun Shen, Antonio Carlo Galoforo, Qi Wu, and Dong Ming. Recovery of Four COVID-19 Patients via Ozonated Autohemotherapy. <i>Innovation (N Y)</i> . 2020 Nov 25; 1(3): 100060. doi: 10.1016/j.xinn.2020.100060
Undetermined	[37 patients received Ozone I.M. <b>Low quality Scientific Evidence Paper</b> ] 18. David Brownstein, Richard Ng, Robert Rowen, Jennie-Dare Drummond, PA, Taylor Eason, Hailey Brownstein, and Jessica Brownstein. A Novel Approach to Treating COVID-19 Using Nutritional and Oxidative Therapies. <i>Science, Public Health Policy, and The Law</i> . <i>Clinical and Translational Research Volume 2:4-22 July, 2020</i> . <a href="https://www.publichealthpolicyjournal.com/clinical-and-translational-research">https://www.publichealthpolicyjournal.com/clinical-and-translational-research</a>
	[19 Covid-19 patient with SSO3 2.2-2.4 µg/mL daily vs 18 Covid-19 patients. Treated patients improve at day 14, compared to control group] 19. Hammad, E. V.; Nikitin, I. G.; Fedorova, K. V. Ozone Therapy in Patients with the New Coronavirus Infection Covid-19. <i>Bulletin of Rehabilitation Medicine</i> ; - (5):94-100. 2020. <a href="https://doi.org/10.38025/2078-1962-2020-99-5-94-100">https://doi.org/10.38025/2078-1962-2020-99-5-94-100</a>
Med Line	[14 Covid-19 patient] 20. Marcos Edgar Fernández-Cuadros et al. (2021) Compassionate use of rectal Ozone (O <sub>3</sub> ) in severe COVID-19 pneumonia: a case-control study. <i>SN Compr Clin Med</i> 2021 Mar 22:1-15. doi: 10.1007/s42399-021-00849-9.

	<b>International Scientific Committee of Ozone Therapy</b>	SOP: ISCO3/ RES /01/03 Version: 24 ENG Date: 12/01/2022
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MedLine	[Egypt, Case report, 2 cases rectal insufflation] 21. Hamdy A Hendawy , Walid Mosallam , Mohamed E Abuelnaga, Amr M Sabry. Old Treatment for a New Disease: Can Rectal Ozone Insufflation Be Used for COVID-19 Management? A Case Report. SN Compr Clin Med. 2021 Apr 14;1-4. doi: 10.1007/s42399-021-00895-3.
2.444	[55 COVID-19 hospitalized patients. 37 MAH 100 mL / 30 µg/mL 7 d vs. 18 Control. Outcome: O <sub>3</sub> could reduce mortality] 22. Şahin Çolak, Burcu Genç Yavuz, Mürsel Yavuz , Burak Özçelik, Metin Öner, Asu Özgütlekin, Seniha Şenbayrak. Effectiveness of ozone therapy in addition to conventional treatment on mortality in patients with COVID-19. Int J Clin Pract. 2021 May 10:e14321. doi: 10.1111/ijcp.14321.
3.380 Cite Score: 5.1 MedLine	[10 patients O3SS ones a day for 8 days]. 23. Alok Sharma, Mili Shah, Satya Lakshmi, Hemangi Sane, Jignasha Captain, Nandini Gokulchandran, Pallavi Khubchandani, M K Pradeep, Prakash Gote, Balaji Tuppekar, Pooja Kulkarni, Amruta Paranjape, Radhika Pradhan, Ritu Varghese, Sushil Kasekar, Vivek Nair, Ummeamara Khanbade. A pilot study for treatment of COVID-19 patients in moderate stage using intravenous administration of ozonized saline as an adjuvant treatment-registered clinical trial. Int Immunopharmacol. 2021 Apr 30;96:107743. doi: 10.1016/j.intimp.2021.107743. Alok Sharma et al. Corrigendum to "A pilot study for treatment of COVID-19 patients in moderate stage using intravenous administration of ozonized saline as an adjuvant treatment-registered clinical trial" [Int. Immunopharmacol. 96 (2021) 107743] Int Immunopharmacol. 2021 Jul 14;107932. doi: 10.1016/j.intimp.2021.107932.
	24. Cachay-Morales, J. & Cachay-Aguro J. (2021). Caso clínico: Uso de la Ozonoterapia Rectal y Solución Salina Ozonizada en paciente con neumonía COVID-19. Reporte de caso. [Clinical Case: Use of Rectal Ozone Therapy and Ozonized Saline Solution in Patient with Covid-19 Pneumonia] <i>Ozone Therapy Global Journal</i> Vol. 11, n° 1, pp 53-68. <a href="https://ozonetherapyglobaljournal.es/en/clinical-case-use-of-rectal-ozone-therapy-and-ozonized-saline-solution-in-patient-with-covid-19-pneumonia/">https://ozonetherapyglobaljournal.es/en/clinical-case-use-of-rectal-ozone-therapy-and-ozonized-saline-solution-in-patient-with-covid-19-pneumonia/</a>
1.72 MedLine	25. Erhan Dengiz, Çağrı Özcan, Yusuf İzzettin Güven, Selcen Uçar, Behçet Kemal Ener, Semih Sözen, Buket Yağcı, İnal Albek Güzel, Betül Yiğit, Aslınur Andaç, Beyza Güneş, Emire Bor, Uğur Karabudak, Ali Kaya. Ozone gas applied through nebulization as adjuvant treatment for lung respiratory diseases due to COVID-19 infections: a prospective randomized trial. <i>Med Gas Res. Apr-Jun 2022;12(2):55-59. doi: 10.4103/2045-9912.326001.</i>
Meta analysis 2.450 MedLine	26. Sarvin Radvar, Sepideh Karkon-Shayan, Ali Motamed-Sanaye, Mohammadreza Majidi, Sakineh Hajebrahimi, Negar Taleschian-Tabrizi, Fariba Pashazadeh, Amirhossein Sahebkar. Using Ozone Therapy as an Option for Treatment of COVID-19 Patients: A Scoping Review. <i>Adv Exp Med Biol. 2021;1327:151-160. doi: 10.1007/978-3-030-71697-4_12.</i>

### Original papers with OUTCOMES prevention / prophylaxis Ozone vs SARS-CoV:

0.2 (2020) Prevention Not indexed	27. Falzoni, W.; Servaitis, M. I.; Iwasa, S. COVID-19 profilaxis with ozonotherapy. <i>Acupuncture and Electro-Therapeutics Research</i> ; 46(1):35-36, 2021. [Prevention, 320 subjects. Treat.: 8 MIAH, Vit. D, B12 in 2 months. Significant decrease in rate of incidence of COVID 19] 28. Mili Shah, Jignasha Captain and Gayatri Ganu. Immunity prophylaxis with ozone therapy –review report. <i>EJBPS 2020, Volume 7, Issue 12, 86-88.</i> <a href="https://www.eibps.com/eibps/abstract_id/7440">https://www.eibps.com/eibps/abstract_id/7440</a> info@ozonetherapyindia.com
Prevention MedLine 3.024	[Prevention, 235 subjects. 64 SSO3 vs 171 Control. Treat.: 4 SSO3 one a day, follow 1 month. Significant decrease in rate of incidence of COVID 19: 4.6% vs 14.03%] 29. A Sharma, M Shah, H Sane, N Gokulchandran, A Paranjape, P Khubchandani, J Captain, S Shirke, P Kulkarni. Intravenous ozonized saline therapy as prophylaxis for healthcare workers (HCWs) in a dedicated COVID-19 hospital in India - A retrospective study. <i>Eur Rev Med Pharmacol Sci.</i> 2021 May;25(9):3632-3639. doi: 10.26355/eurrev_202105_25847.
Prevention Not indexed	30. Mazorra Ordóñez, Vivian de las Mercedes (2021). Papel de la auto hemoterapia menor en la prevención de la COVID 19 en ancianos institucionalizados. Reporte de casos. [Role of minor autohemotherapy in the prevention of COVID 19 in institutionalized elderly. Case report]. <i>Ozone Therapy Global Journal</i> Vol. 11, n° 1, pp 97-111. <a href="https://ozonetherapyglobaljournal.es/en/role-of-minor-autohemotherapy-in-the-prevention-of-covid-19-in-institutionalized-elderly-case-report/">https://ozonetherapyglobaljournal.es/en/role-of-minor-autohemotherapy-in-the-prevention-of-covid-19-in-institutionalized-elderly-case-report/</a>

### Original papers with OUTCOMES sequelae / Convalescents Ozone vs SARS-CoV2:

0.2 (2020) Prevention Not indexed	31. Fernando C. Dotta Barros; Sumie Iwasa. Persistent Anosmia after COVID-19 Infection: Treatment Options According to BDORT. <i>Acupuncture and Electro-Therapeutics Research</i> ; 46(1):33-34, 2021. 32. Iván Alexis Pacheco Cárdenas and Gregorio Martínez-Sánchez (2021). La ozonoterapia en la prevención y tratamiento de las secuelas de pacientes de Covid-19. Reporte de casos. [Ozone therapy in the prevention and treatment of long-term health consequences of Covid-19 patients. Cases report]. <i>Ozone Therapy Global Journal</i> Vol. 11, n° 1, pp 125-139. <a href="https://ozonetherapyglobaljournal.es/en/ozone-therapy-in-the-prevention-and-treatment-of-long-term-health-consequences-of-covid-19-patients-cases-report/">https://ozonetherapyglobaljournal.es/en/ozone-therapy-in-the-prevention-and-treatment-of-long-term-health-consequences-of-covid-19-patients-cases-report/</a>
1.571 Med Line	33. U Tirelli, M Franzini, L Valdenassi, S Pisconti, R Taibi, C Torrisi, S Pandolfi, S Chirumbolo. Fatigue in post-acute sequelae of SARS-CoV2 (PASC) treated with oxygen-ozone autohemotherapy - preliminary results on 100 patients. <i>Eur Rev Med Pharmacol Sci.</i> 2021 Sep;25(18):5871-5875. doi: 10.26355/eurrev_202109_26809.
	34. Lizette Gil-del-Valle, Olga Elena López-Fernández, Joniel Arnoldo Sánchez- Márquez, Zulilyt Zamora-Rodríguez, Ana Librada Carballo-Reyes, Lidia Asela Fernández-García, Mario Manuel Delgado-Guerra, Faustina Fonseca-Betancourt, Ernesto Miyares-Díaz, Yasmina Piloto Orraca, Yusimit Bermudez-Alfonso, Maria Carla Hdez Glez-Abreu, Sarahi Mendoza-Castaño, Yamila Ramona de Armas-Aguila. Amelioration of Symptoms and Oxidative Stress in Hospitalized Convalescent Post Sars-Cov-2 Patients Treated With Rectal Ozonotherapy and Nutritional Supplementation. <i>International Journal of Modern Pharmaceutical Research</i> 2020, 4(6), 94-107.

### Original papers with OUTCOMES side effects Ozone vs SARS-CoV2:

	Gil del Valle L, Delgado Guerra MM, Carballo-Reyes AL, Sánchez Márquez JA, López Fernández OE, Fonseca Betancourt F, Zamora-Rodríguez Z, Fernández García LA, Suárez Iznaga R, Martínez Casanueva R, Castro de la Fe L, Gonzalez Carvajal N, Castellanos Veitia SV, de Armas-Aguila YR (2021) Observancia de reacciones adversas y análisis de cumplimiento de bioseguridad en la aplicación rectal de ozonoterapia en pacientes cubanos con infección aguda o convalescentes de COVID-19 [Observance of adverse reactions and analysis of biosafety compliance in the rectal application of ozone therapy in COVID-19 Cuban patients with acute infection or convalescent]. <i>J Pharm Pharmacogn Res</i> 9(4): 465–473.
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### Preprint / Preliminary:

Fedorova T.A., Bakuridze E.M., Yesayan R.M., Kozachenko I.F., Nikolaeva A.V. Application of ozone therapy in the complex treatment of patients with COVID-19 (Preliminary results). SBI NMITs AGP named after V.I. Kulakov "Ministry of Health of Russia, Moscow. [Ozone therapy SSO3 was given to 134 patients (patients' age - from 18 to 94 years).