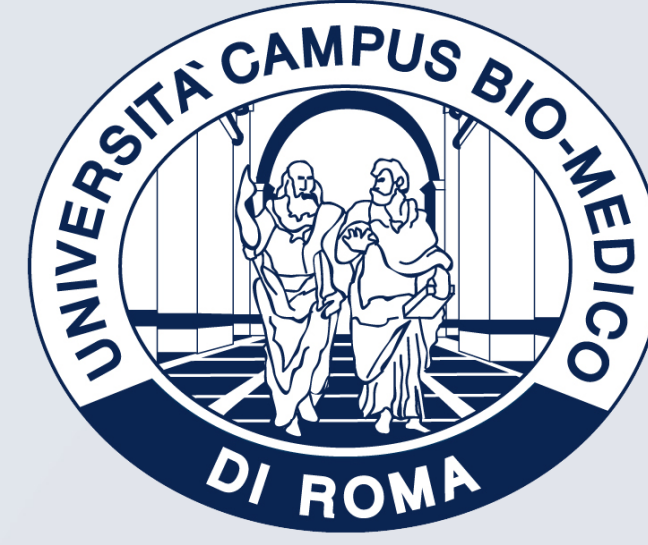


An electronic registry for Older Adults Long-Term Health Trajectories during Covid-19 pandemic: the GeroCovid and Gerovax approach.

Susanna Del Signore ⁽¹⁾⁽²⁾, Raffaele Antonelli Incalzi ⁽³⁾, Graziano Onder ⁽⁴⁾, Alba Malara ⁽⁵⁾, Caterina Trevisan ⁽⁶⁾⁽¹²⁾, Angela Marie Abbatecola ⁽⁷⁾, Gianluca Zia ⁽²⁾, Stefania Del Signore ⁽²⁾, Annapina Palmieri ⁽⁴⁾, Anna Di Lonardo ⁽⁴⁾, Gilda Borselli ⁽⁸⁾, Marcello Russo ⁽⁷⁾, Marianna Noale ⁽⁹⁾, Stefano Fumagalli ⁽¹⁰⁾, Pietro Gareri ⁽¹¹⁾, Enrico Mossello ⁽¹⁰⁾, Stefano Volpato ⁽¹²⁾, Fabio Monzani ⁽¹³⁾, Alessandra Coin ⁽⁶⁾, Giuseppe Bellelli ⁽¹⁴⁾, Chukwuma Okoye ⁽¹³⁾, Elisa Bottoni ⁽¹⁵⁾, Carmine Cafariello ⁽¹⁶⁾ on behalf of the GeroCovid Observational & GeroCovid Vax Group

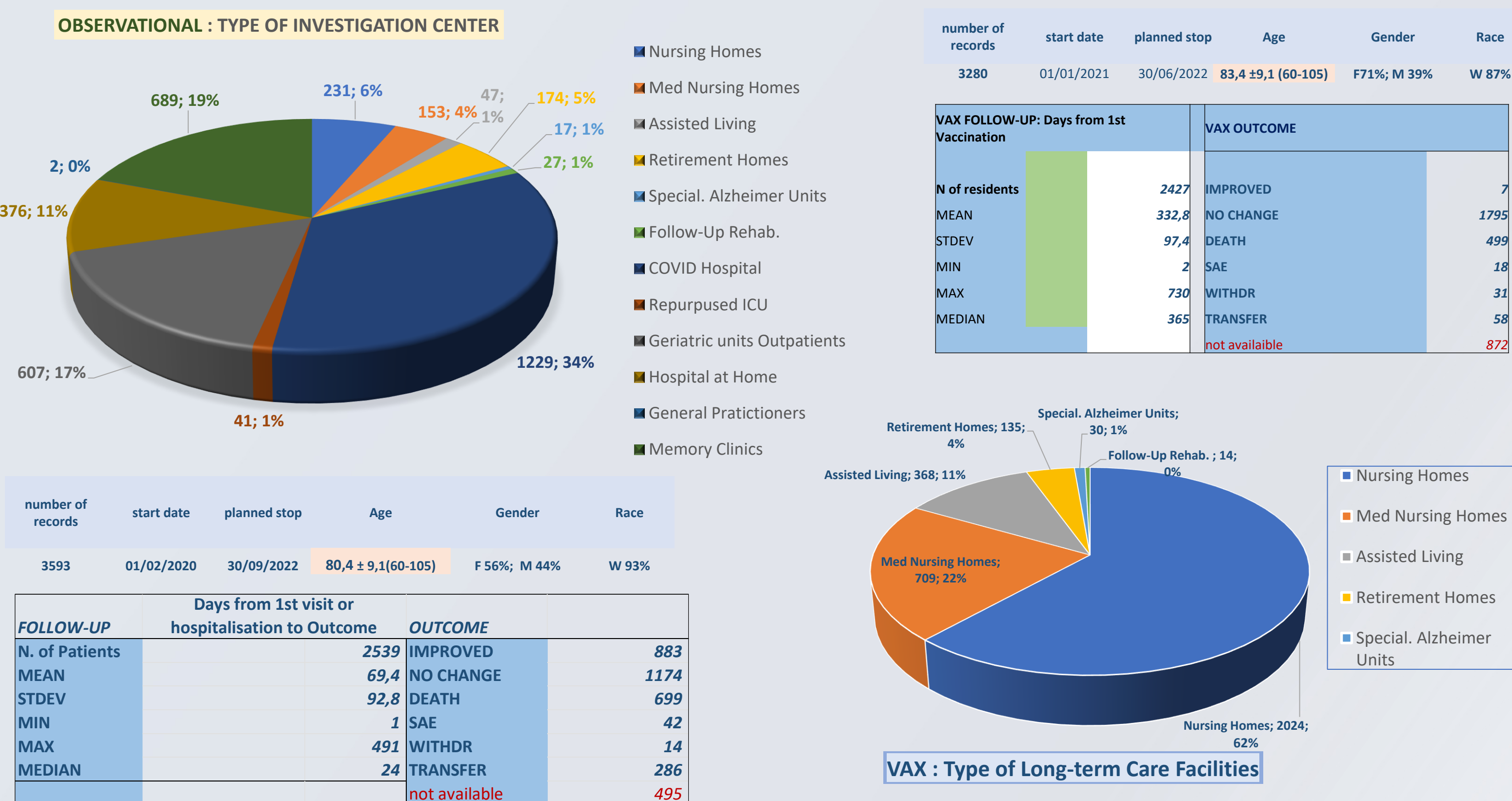
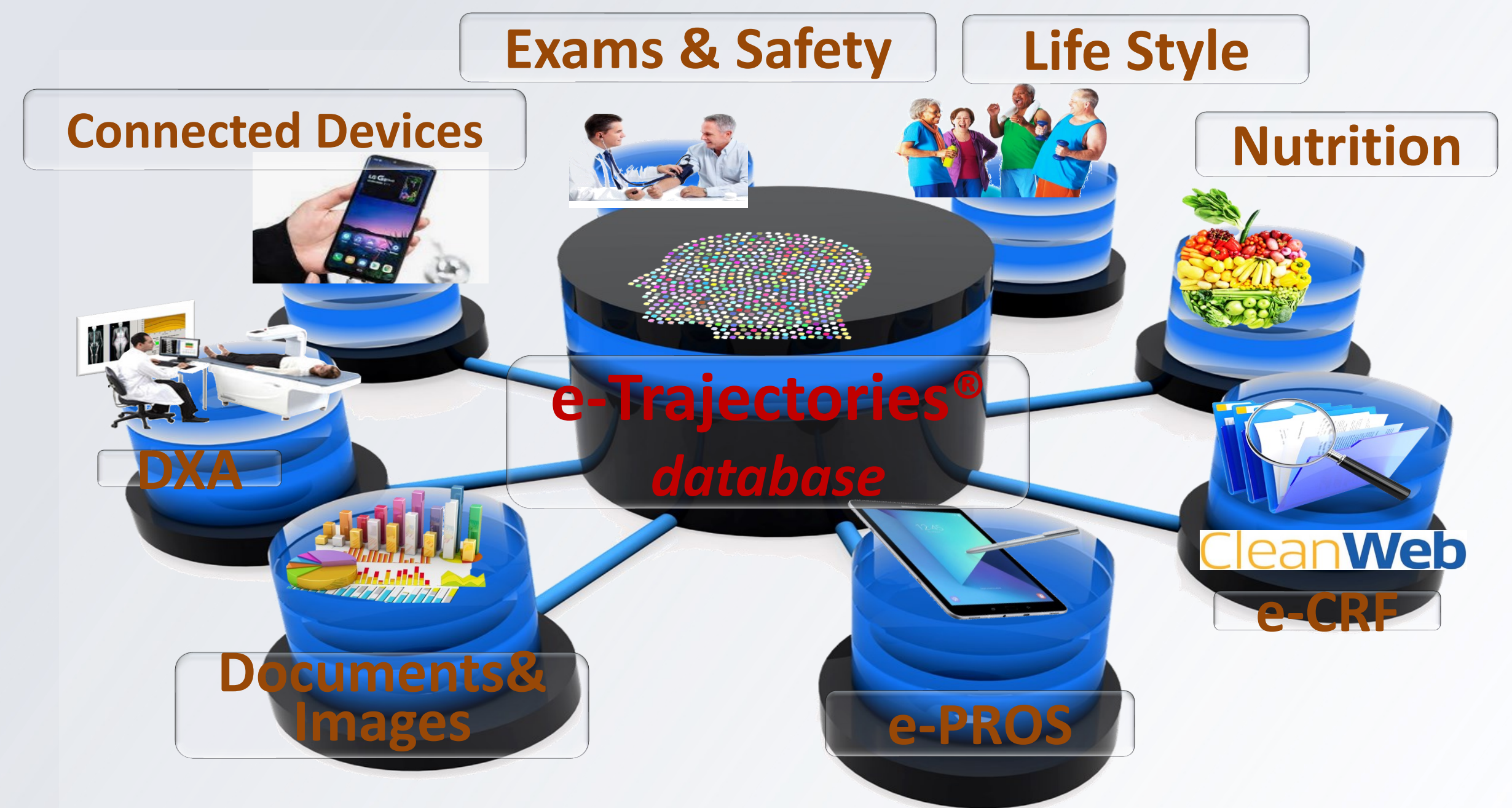
1) Bluecompanion France, Jambville, France	2) Bluecompanion Ltd, London, United Kingdom	3) Unit of Geriatrics, Department of Medicine, Campus Bio-Medico University and Teaching Hospital, Rome, Italy	4) Department of Cardiovascular, Endocrine-Metabolic Diseases and Aging, Istituto Superiore di Sanità, Roma, Italy
5) ANASTE-Humanitas Foundation, Rome, Italy	6) Geriatrics Division, Department of Medicine (DIMED), University of Padua, Italy	7) Azienda Sanitaria Locale (ASL) Alzheimer's Disease Day Clinic, Frosinone, Italy	8) Italian Society of Gerontology and Geriatrics (SIGG), Florence, Italy
9) Aging Branch, Neuroscience Institute, National Research Council, Padua, Italy	10) Geriatric Intensive Care Unit, Department of experimental and Clinical Medicine, University of Florence, Italy	11) Center for Cognitive Disorders and Dementia – Catanzaro Lido, ASP Catanzaro, Italy	12) Department of Medical Science, University of Ferrara, Italy
13) Geriatrics Unit, Department of Clinical and Experimental Medicine, University of Pisa, Italy	14) School of Medicine and Surgery, University of Milano-Bicocca and Acute Geriatric Unit, San Gerardo Hospital, Monza, Italy	15) Centro Benessere (Rehabilitation center) Frosinone, Italy	16) Geriatrics Outpatient Clinic and Territorial Residences, Italian Hospital Group, Rome, Italy



Introduction On March 2020, Bluecompanion developed a web-based electronic registry in partnership with the Italian Society of Gerontology and Geriatrics (SIGG), to capture long-term clinical trajectories of older persons suffering or at-risk of COVID-19 across geriatrics practices and residential facilities. “GeroCovid Observational” followed 3593 participants in 86 Italian and 3 Norwegian investigational sites.

Objective To adapt GeroCovid e-registry, a multidisciplinary geriatric investigational tool, to the different phases of Covid-19 pandemic.

Methods Bluecompanion’s e-Trajectories, is based on a CleanWeb engine (Telemedicine-Technologies, France). Servers are located in the EU, and operations compliant with the European General Data Protection Regulation (GDPR), ISO 9001 certification and FDA CFR 21 part 11. Bluecompanion provided on-line training sessions for investigators, as well as technical support. Data collection underwent quality checks and investigators were required solve raised queries. All individual clinical data were anonymized before data entry.



Results

In March 2021 the e-registry was adapted as the eCRF of Gerovax, an Italian Medicines Agency (AIFA) sponsored observational clinical trial led by the Istituto Superiore di Sanità (ISS).

“Gerovax” enrolled 3280 vaccinated residents in 73 Italian Long Term Care Facilities, observed for 12 months after the first dose vaccination. Data collection covered the lapse from December 2020 to June 2022.

The standardized clinical data capture allowed to test several statistical hypotheses to clarify the influence of initial clinical characteristics over the short and long-term health and vaccination outcomes.

Conclusions

Overall, the development of a specialised web-based investigational data platform generated a conspicuous amount of high-quality longitudinal clinical data despite a critical context, the COVID-19 pandemic, and succeeded to study an often “difficult to reach” population, older persons suffering from multiple comorbidities, living in the community or in Nursing Homes.

E-Trajectories, a geriatric multidisciplinary web-based e-registry enabled high-quality longitudinal clinical data follow-up in approximately 6000 older persons suffering from multiple comorbidities, living in the community or in LTCF, and to analyse complex health trajectories after COVID-19 vaccination.

Bibliography:

1. Covid-19 as a paradigmatic model of the heterogeneous disease presentation in older age Trevisan C., Remelli F., Fumagalli S., et al. *Rejuvenation Res.* 2022 May 16. <https://doi.org/10.1089/rej.2021.0063>
2. Computed tomography findings and prognosis in older COVID-19 patients. Okoye C., Finamore P., Bellelli G. et al. *BMC Geriatr.* 2022 Mar 1;22(1):166. <https://doi.org/10.1186/s12877-022-02837-7>
3. Clinical features of SARS-CoV-2 infection in Italian Long-Term Care Facilities: GeroCovid LTCFs Observational Study Malara A., Noale M., Abbatecola A.M., et al. *J Am Med Dir Assoc.* 2021 Oct 23;S1525-8610(21)00913-0. <https://doi.org/10.1016/j.jamda.2021.10.009>
4. Atrial fibrillation and COVID-19 in older patients: how disability contributes to shape the risk profile. An analysis of the GeroCovid registry. Fumagalli S., Trevisan C., Del Signore S., et al. *Aging Clin Exp Res.* 2021 Oct 30. <https://doi.org/10.1007/s40520-021-02008-5>
5. Psychological Well-Being of Older Adults With Cognitive Deterioration During Quarantine: Preliminary Results From the GeroCovid Initiative. Coin A., Devita M., Trevisan C., et al. *Front Med (Lausanne).* 2021 Sep 22;8:715294. eCollection 2021. <https://doi.org/10.3389/fmed.2021.715294>
6. Management of Older Outpatients during the COVID-19 Pandemic: The GeroCovid Ambulatory Study. Gareri P., Fumagalli S., Malara A., et al. *Gerontology.* 2021 Jun 28;1-6. DOI: 10.1159/00051696 <https://doi.org/10.1159/00051696>
7. Oral anticoagulant therapy at hospital admission associates with lower mortality in older COVID-19 patients with atrial fibrillation. An insight from the Covid Registry. Fumagalli S., Trevisan C., Del Signore S., et al. *EP Europace*, Volume 23, Issue Supplement_3, May 2021, euab116.300. <https://doi.org/10.1093/europace/euab116.300>
8. Atrial fibrillation and COVID-19 in older patients: a complex, dangerous, association. An analysis of the GeroCovid Registry. Fumagalli S., Pelagalli G., Trevisan C., et al. *EP Europace*, Volume 23, Issue Supplement_3, May 2021, euab116.154. <https://doi.org/10.1093/europace/euab116.154>
9. COVID-19 and atrial fibrillation in older patients. Does oral anticoagulant therapy provide a survival benefit? An insight from the GeroCovid Registry. Fumagalli S., Trevisan C., Del Signore S., et al. *Thromb Haemost.* 2021 May 7. Online ahead of print. <https://doi.org/10.1055/a-1503-3875>
10. Assessing the impact of COVID-19 on the health of geriatric patients: The European GeroCovid Observational Study. Trevisan C., Del Signore S., Fumagalli S., et al. *Eur J Intern Med.* 2021 May;87:29-35. Epub 2021 Jan 31. <https://doi.org/10.1016/j.ejim.2021.01.017>
11. Are vaccines against COVID-19 tailored to the most vulnerable people? Antonelli Incalzi R., Trevisan C., Del Signore S., et al. *Vaccine.* 2021 Apr 22;39(17):2325-2327. Epub 2021 Mar 22. <https://doi.org/10.1016/j.vaccine.2021.03.066>