

Cristóbal Vargas Sepúlveda

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 ORCID

 Portafolio



Education

- 2017 – 2021  **Bachelor of Science in Engineering.**
Major and minor in Biomedical Engineering, Premedicine track.
Pontifical Catholic University of Chile.
- 2020 – 2025  **Medical School.**
Pontifical Catholic University of Chile.
- 2025 – pres.  **Clinical Clerkship (Final Year).**
Pontifical Catholic University of Chile.

Student Positions

- 2018 - 2019  **Academic Coordinator, Biomedical Engineering Student Chapter.**
Institute for Biological and Medical Engineering, School of Engineering.
Pontifical Catholic University of Chile.

International Experience

- 2025  **U21 Health sciences interprofessional education student challenge 2025 - Participant.**
Universitas 21 Health Sciences Group - *Healthy Ageing in the Context of Climate Change*

Publications

- 2024  **Validation of phantom model in fundoscopy examination simulation for undergraduate students.** Vargas-Sepúlveda C, Salgado L, Musa P, et al.
Latinamerican Journal of Clinical Simulation.
<https://dx.doi.org/10.35366/115802>
- 2025  **Prevalence of Barrett's Esophagus and factors associated with neoplasia diagnosis in a Chilean University Center.**
A. Espino, M. Fuenzalida, G. Latorre, F. Silva, O. Corsi, R. Palma, J. Torres, R. Nieto, V. Constanzo, G. Fuentes, M. Nilo, L. Salgado, C. Vargas, J. Vargas.
Revista de Gastroenterología del Perú.
<https://revistagastroperu.com/index.php/rgp/article/view/2104>

Scientific Conferences and Presentations

- 2020 **Research, Innovation and Entrepreneurship Congress – The Clover 2030, Winner.**
3DORT: *Creation of customized orthoses using photographs.*
- 2023 **Pan American Week of Digestive Diseases (SPED) – Santiago, Chile.**
“*Barrett’s Esophagus in Chile: Characterization of an endoscopic cohort and factors associated with the neoplasia detection rate.*”
Fuenzalida, Latorre, Felipe, Vargas J, Corsi, Palma, Torres, Nieto, Constanzo, Fuentes, Nilo, Salgado, Vargas C, Espino.
<https://doi.org/10.46613/congastro2023-105>
- 2025 **European Society of Intensive Care Medicine (ESICM) – Munich, Germany.**
“*Identification of a body mass index threshold associated with reduced respiratory system compliance during trunk inclination in acute respiratory failure: a preliminary analysis.*”
Benites, Morales, Vargas, Santis, Valenzuela Espinoza, Selickman, Marini, Retamal.
<https://doi.org/10.1186/s40635-025-00797-x> (Vol. 31, Supl. 1, p. 747)
- Chilean Congress of Radiology – Santiago, Chile.**
“*Implementation of a technique for grading hepatic fat percentage by MRI in the Chilean pediatric population as an alternative to PDFF.*” (Oral presentation)
González JM, Vargas C, Gana JC, García C, De Barbieri F.
- 43rd Chilean Congress of Intensive Care Medicine – Pucón, Chile.**
“*Sarcopenia in critically ill patients with ARDS: longitudinal assessment using computed tomography at the T8 and L3 vertebral levels.*”
Hernández, Santos, Vargas C, Vera H, Besa, Santis, Bravo, Vera M, Retamal.
- Liver Cancer Summit 2026 (EASL) – Edinburgh, Scotland.**
“*Interim clinical outcomes from a prospective cohort study of stereotactic body radiotherapy for hepatocellular carcinoma at a university hospital in Chile.*” (Under scientific committee review)
Rivera, Vargas, Solis, Barrera, Diaz, Reyes, Antunez, El Far, Besa, Lapitz, Rodrigues, Banales, Arrese, Munoz-Schuffenegger.
- ASTRO Annual Meeting 2026 – Boston, United States.**
“*Preliminary clinical outcomes from a prospective cohort, single-institution, phase II study of stereotactic body radiotherapy for hepatocellular carcinoma in Chile.*” (Under scientific committee review)
Muñoz-Schuffenegger, Rivera, Vargas, Solis, Barrera, Díaz, Soza, Meneses, Reyes, Antúnez, El Far, Besa, Huete, Jarufe, Mondaca, Nervi, Arrese.

Research Assistantships

- 2020 **Undergraduate Research, School of Engineering.**
“*Design and fabrication of gradients for a desktop magnetic resonator.*”
Principal investigator: Pablo Irarrázaval, PhD.
Mentor: Carlos Castillo Passi, PhD.

- 2022 ■ **Undergraduate Research, School of Medicine.**
“*Research in mechanisms of neuropathic pain*”.
Principal investigator: Margarita Calvo, MD, PhD.
Mentor: Gustavo Torres, PhD Candidate.
- 2022 - 2023 ■ **Undergraduate Research Funding, School of Medicine.**
“*Validation of phantom model in fundoscopy examination simulation for undergraduate students*”.
Academic mentor: Arturo E. Grau, MD, MSc.
- **Undergraduate Research - Family Medicine, School of Medicine.**
“*Abdominal Ultrasound in Primary Care: A Necessary and Feasible Diagnostic Support*”.
Principal investigator: Andrea Rioseco, MD.
- 2023 ■ **Undergraduate Research - Gastroenterology, School of Medicine.**
“*Prevalence of Barrett’s Esophagus and factors associated with a diagnosis of dysplasia or adenocarcinoma in patients evaluated at a chilean university endoscopy center*”.
Principal investigators: María Jesús Fuenzalida, MD.; Alberto Espino, MD.
- 2024 ■ **Undergraduate Research - Gastroenterology, School of Medicine.**
“*Abnormal p53 Expression as a Predictor of Neoplastic Progression in Patients with Barrett’s Esophagus: Barrett UC-CHILE Cohort*”.
Principal investigators: Renato Palma Fernández, MD.; Alberto Espino, MD.
- **Undergraduate Research - Radiotherapy, School of Medicine.**
“*Incidence of lymphopenia and its impact on overall survival in patients with chronic liver damage and hepatocellular carcinoma treated with stereotactic body radiotherapy (SBRT)*”.
Principal investigator: Pablo Muñoz-Schuffenegger, MD.
- 2025 ■ **Undergraduate Research - Radiotherapy, School of Medicine.**
“*Tumor response and biomarkers in patients with hepatocellular carcinoma treated with stereotactic body radiotherapy*.”
Principal investigator: Pablo Muñoz-Schuffenegger, MD.
- **Undergraduate Research - Intensive Care Medicine, School of Medicine.**
“*Biomechanical analysis of biomedical images*.”
Principal investigator: Jaime Retamal, MD, MSc, PhD.
- **Radiology, School of Medicine – iHEALTH.**
“*Analysis of prostate T1/T2 parametric maps obtained using the DESPOT+ sequence in patients with suspected prostate cancer*.”
Principal investigators: González, MD; Coronado, PhD.; Irarrázaval, PhD.; Besa, MD.

- 2026-pres. **Undergraduate Research – Radiotherapy, School of Medicine.**
“*Stereotactic body radiotherapy in the treatment of hepatocellular carcinoma.*”
Principal investigator: Muñoz-Schuffenegger, MD.
- Undergraduate Research – Radiology, School of Medicine.**
“*Radiomic evaluation of adrenal nodules using advanced medical image analysis.*”
Principal investigator: Besa, MD.
- Interdisciplinary Design–Medicine Grant 2025.**
“*Development of a phantom and methodological guide for simulation-based training in Retinopathy of Prematurity (ROP).*”
Principal Investigator: Dr. Arturo Grau Diez, MAsC.

Teaching Assistantships

- 2018 **Linear Algebra**, Laboratory.
- 2019 **Calculus III**, Laboratory.
Differential Equations, Laboratory.
- 2021 **Clinical Skills I – Ophthalmology**, Funduscopic Examination Workshop.
- 2022 - 2023 **Social Innovation in Health**, Lecture.
- 2024 **Chest Radiology**, Lecture.
- 2025 **Lumbar Puncture**, Clinical Skills Simulation.

Volunteer Experience

- 2021-2022 **Muévete por la Salud.**
■ *Conducted health campaigns in rural areas to promote community health.*
■ *Provided primary care services, health screenings, and patient education.*
■ *Collaborated with multidisciplinary teams to address healthcare disparities.*

Skills

- Languages **Spanish:** Native.

-  **English:** B2.
- Programming
 -  **Latex-Lyx:** Advanced.
 -  **Python:** Intermediate.
 -  **Wolfram|Alpha:** Intermediate.
- Databases
 -  **Excel:** Advanced.
 -  **R:** Basic – *Certification in progress.*