

Cristóbal Vargas Sepúlveda

✉ cavargas8@uc.cl

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, Benites, 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, MASc.
-  **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, MASc, 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.; Irrarrázaval, PhD.; 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.

- 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**, Funduscopy 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.*