

# Cristóbal Vargas Sepúlveda

✉ cavargas8@uc.cl

📄 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.**  
Fuenzalida, Latorre, Felipe; Vargas J, Corsi; Palma, Torres, Nieto, Constanzo, Fuentes, Nilo, Salgado, Vargas C, Espino.  
Revista de Gastroenterología del Perú. (*Submitted manuscript*)

## 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://icm-experimental.springeropen.com> (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-pres.      ■ **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.

## Teaching Assistantships

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

## Volunteer Experience

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- 2021-2024       **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

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