

# Cristóbal Vargas Sepúlveda

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📁 Portfolio



## 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, 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-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, 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.


## 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.*