

PERSONAL INFORMATION

Leonardo Provenzano

EDUCATION AND TRAINING

Sep 2023 – ongoing	PhD Student in Bioengineering at Polytechnic University, Milan	
Nov 2019 – Oct 2024	Medical Oncology Specialization at “Fondazione IRCCS Istituto Nazionale dei Tumori”, Milan	70/70 cum laude
Feb – Jun 2019	National diploma of Clinical Ultrasound “SIUMB”	
Oct 2014 – July 2018	Degree in Medicine and Surgery at “Università degli Studi di Milano”	110/110 cum laude
Oct 2016 – June 2018	Attendance at hospital ward OM1 at “IRCCS Istituto Nazionale Tumori” in Milan	
2017	Ultrasound course at “IRCCS Ospedale Maggiore Policlinico”	
Feb 2015 – Nov 2016	Residency at laboratory of Endocrinology at “IRCCS Ospedale Maggiore Policlinico” in Milan	
10/2005 – 09/2014	Degree in Pianoforte at “Tito Schipa” Music Academy in Lecce	
Sep 2007 – Jun 2012	High school leaving qualification in classical studies at “Liceo F. Capece” (Maglie – LE)	100/100 cum laude

PRACTICAL AND WORK EXPERIENCE

Jan 2024 – ongoing	Principal Investigator of the project “Using RADlomics to predict HER2 status And T-DXd efficacy in metastatic breast cancer: the RADIOSPHER2 study” at “Fondazione IRCCS Istituto Nazionale dei Tumori”, Milan, funded by “Line 4” Institutional Grant
Nov 2019 – Oct 2024	Fellow at Medical Oncology Department at “Fondazione IRCCS Istituto Nazionale dei Tumori”, Milan, focusing on breast cancer
Sep 2023 – ongoing	Collaboration with Artificial Intelligence Lab “ AI-ON-LAB ”, Milan, working on Artificial Intelligence-based clinical trial
Oct 2020 – Jun 2021	Residency at Oncology Department, Ospedale San Paolo, Milano
Dec 2018	Residency at “U.O. Chirurgia Generale” of “Ospedale Cardinale G.Panico” - Tricase
Jan 2019	Residency at “U.O. Medicina Interna” of “Ospedale V.Fazzi” - Lecce

PERSONAL SKILLS

Mother tongue Italian

Other language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	Good	Good	Good	Good	Good
Biomedical English					

Communication skills

Aug 2023 TOEFL ibt Certificate
Attendance at course of diction and technique of verbal communication (2015/2016)

Job-related skills

Clinical and oncological skills in hospital context.
Clinical bedside ultrasound execution.
Laboratory skills: perform with supervision some biotechnological techniques, like PCR, MLPA, Sanger Sequencing, DNA Electrophoresis.
Design and set up of clinical research trial, collecting and interpreting data in the context of clinical trial or observational study.
Experience in data manipulation, regression and survival analyses and machine learning model development with R software.

PUBLICATIONS

"Early downmodulation of tumor glycolysis predicts response to fasting-mimicking diet in triple-negative breast cancer patients." Ligorio F, ..., [Provenzano L](#), Vernieri C. **Cell Metab.** 2024 Dec 17;S1550-4131(24)00450-9. doi: 10.1016/j.cmet.2024.11.004. PMID: 39694040.

"Decoding KRAS mutation in non-small cell lung cancer patients receiving immunotherapy: A retrospective institutional comparison and literature review." Urtecho SB, [Provenzano L](#), et al. **Lung Cancer.** 2025;199,108051. doi: 10.1016/j.lungcan.2024.

"The impact of decision tools during oncological consultation with lung cancer patients: A systematic review within the I3LUNG project." Sebri V, ..., [Provenzano L](#), et al. **Cancer Med.** 2024;13(9),e7159. doi: 10.1002/cam4.7159.

"Unveiling the prognostic significance of malignant ascites in advanced gastrointestinal cancers: a marker of peritoneal carcinomatosis burden." [Provenzano L](#), et al. **Ther Adv Med Oncol.** 2024;16. doi:10.1177/17588359241289517.

"Artificial intelligence for predictive biomarker discovery in immuno-oncology: a systematic review." Prelaj A, ..., [Provenzano L](#), et al. **Ann Oncol.** 2024;35(1):29-65. doi: 10.1016/j.annonc.2023.10.125. Epub 2023 Oct 23. PMID: 37879443.

"Fasting-mimicking diet: a metabolic approach for the treatment of breast cancer." Ligorio F, [Provenzano L](#), Vernieri C. **Curr Opin Oncol.** 2023;35(6):491-499. doi: 10.1097/CCO.0000000000000986. Epub 2023 Jul 28. PMID: 37621169.

"APOLLO 11 Project, Consortium in Advanced Lung Cancer Patients Treated With Innovative Therapies: Integration of Real-World Data and Translational Research." Prelaj A, Ganzinelli M, [Provenzano L](#), et al. **Clin Lung Cancer.** 2024 Mar;25(2):190-195. doi: 10.1016/j.clcc.2023.12.012. Epub 2023 Dec 22. PMID: 38262770.

"Peripheral blood lymphocytes predict clinical outcomes in hormone receptor-positive HER2-negative advanced breast cancer patients treated with CDK4/6 inhibitors." Zattarin

E, Mariani L, Menichetti A, Leporati R, Provenzano L, et al. **Ther Adv Med Oncol**. 2023 20;15:17588359231204857. doi: 10.1177/17588359231204857. PMID: 38130467; PMCID: PMC10734364.

"The pan-immune-inflammation value is associated with clinical outcomes in patients with advanced TNBC treated with first-line, platinum-based chemotherapy: an institutional retrospective analysis." Provenzano L, Lobefaro R, ..., de Braud F, Vernieri C, Fucà G. **Ther Adv Med Oncol**. 2023 Apr 13;15:17588359231165978. doi: 10.1177/17588359231165978. PMID: 37063779; PMCID: PMC10102956.

"PEOPLE (NTC03447678), a phase II trial to test pembrolizumab as first-line treatment in patients with advanced NSCLC with PD-L1 <50%: a multiomics analysis." Lo Russo G, ..., Provenzano L, et al. **J Immunother Cancer**. 2023 Jun;11(6):e006833. doi: 10.1136/jitc-2023-006833.

"Adding fasting-mimicking diet to first-line carboplatin-based chemotherapy is associated with better overall survival in advanced triple-negative breast cancer patients: A subanalysis of the NCT03340935 trial." Ligorio F, ..., Provenzano L, ..., Vernieri C. **Int J Cancer**. 2024 Jan 1;154(1):114-123. doi: 10.1002/ijc.34701. Epub 2023 Aug 24. PMID: 37615485.

"Ascites During Selpercatinib Treatment: Need for a Multidisciplinary Approach." Provenzano L, et al. **J Thorac Oncol**. 2023 Feb;18(2):e9-e10. doi: 10.1016/j.jtho.2022.09.229. PMID: 36682848.

"Breast cancers arising in subjects with germline BRCA1 or BRCA2 mutations: Different biological and clinical entities with potentially diverse therapeutic opportunities." Zattarin E, ..., Provenzano L, et al. **Crit Rev Oncol Hematol**. 2023 Oct;190:104109. doi: 10.1016/j.critrevonc.2023.104109. Epub 2023 Aug 27. PMID: 37643668.

"Outcomes and a prognostic classifier in patients with microsatellite instability-high metastatic gastric cancer receiving PD-1 blockade." Randon G, ..., Provenzano L, et al. **J Immunother Cancer**. 2023 Jun;11(6):e007104. doi: 10.1136/jitc-2023-007104. PMID: 37277193; PMCID: PMC10255232.

"Carcinomatosis under control by osimertinib in EGFR and TP53 mutated lung adenocarcinoma". Provenzano L, et al. **Tumori**. 2022. doi:10.1177/03008916211052330.

"Real-world data to build explainable trustworthy artificial intelligence models for prediction of immunotherapy efficacy in NSCLC patients." Prelaj A, Galli EG, Miskovic V, ..., Provenzano L, ..., Pedrocchi ALG. **Front Oncol**. 2023 Jan 23;12:1078822. doi: 10.3389/fonc.2022.1078822. PMID: 36755856; PMCID: PMC9899835.

"Exceptional tumour responses to fasting-mimicking diet combined with standard anticancer therapies: A sub-analysis of the NCT03340935 trial". Ligorio F, Fucà G, Provenzano L, ..., Vernieri C. **Eur J Cancer**. 2022. doi:10.1016/j.ejca.2022.05.046.

"Prognostic significance of HER2-low status in HR-positive/HER2-negative advanced breast cancer treated with CDK4/6 inhibitors." Zattarin E, Presti D, ..., Provenzano L, ..., Vernieri C. **NPJ Breast Cancer**. 2023 Apr 17;9(1):27. doi: 10.1038/s41523-023-00534-1. PMID: 37069173; PMCID: PMC10110597.

"Ascites and resistance to immune checkpoint inhibition in dMMR/MSI-H metastatic colorectal and gastric cancers". Fucà G, Cohen R, Lonardi S, ..., Provenzano L, ..., Pietrantonio F. **J Immunotherap Cancer**. doi: 10.1136/jitc-2021-004001.

"Prognostic and Predictive Role of Body Mass Index (BMI) in Metastatic Colorectal Cancer (mCRC): A Pooled Analysis of Tribe and Tribe-2 Studies by GONO". Dell'Aquila E, Rossini

D, Galletti A, ..., Provenzano L, ..., Santini D. **Clin Col Cancer**, 2022. doi:10.1016/j.clcc.2022.02.003.

"Systemic lupus erythematosus reactivation after chemoimmunotherapy in preexisting autoimmune disease". Spagnoletti A, Platania M, Brambilla M, ..., Provenzano L, ..., Prelaj A. **Tumori**. 2022. doi:10.1177/03008916211067565.

"Risk assessment of thromboembolic events in hospitalized cancer patients". Nichetti F, Ligorio F, Montelatici G, Provenzano L, ..., et al. **Sci Rep**, 2022. doi:10.1038/s41598-021-97659-9.

"ALK/ROS1 rearrangements: A real hallmark for thromboembolic events in cancer patients?". Nichetti F, ..., Provenzano L, et al. **Thrombosis Research**, 2020. doi:10.1016/j.thromres.2020.06.041.

"TK-1, TP, Ang-2, and Tie-2 mRNA expression in plasma-derived microvesicles of chemo-refractory metastatic colorectal cancer patients." Borelli B, Crucitta S, ..., Provenzano L, ..., Moretto R. **Tumori**. 2023;6:3008916221147944. doi: 10.1177/03008916221147944. Epub ahead of print. PMID: 36609197.

"Recent advances in small cell lung cancer: the future is now?" Luciani A, Blasi M, Provenzano L, et al. **Minerva Endocrinol**. 2020. doi: 10.23736/S0391-1977.20.03213-7.

"Metabolic radiotherapy for treatment of bone metastasis from prostatic adenocarcinoma," Provenzano L, et al. **AITOG-OGGI**; 6:31-35.

CONGRESSES

Speaker at "Preceptorship su ruolo del complesso HRR" Congress, Nov 2024, Milan

Speaker at "Breast in Translation" Congress, May 2024, Padua

Speaker at "Artificial Intelligence for Oncology" Congress, May 2024, Milan

Speaker at "Treatment algorithms in luminal breast cancer therapy" Congress, May 2024, Milan

Poster Presenter at ESMO Breast 2024 Congress, Apr 2024, Berlin - "Artificial Intelligence to predict early progressors among aBC patients treated with first-line CDK4/6i: A sub-analysis from PALMARES-2 study". Provenzano L, ..., Vernieri C. *Ann Onc*, 9 Suppl 4: 1-34, 2024. 10.1016/esmoop/esmoop103010. – Travel Recipient

Poster Presenter at ESMO 2023 Congress, Oct 2023, Berlin - "BRCA mutations may induce immune-resistance in breast cancer patients treated with IO-only approach: A retrospective analysis." Provenzano L, Giani C, Mazzeo L, De Braud F, Damian S. 8, 1, Suppl 4, 101300, 2023. doi.org/10.1016/j.esmoop.2023.101300.

Poster Presenter at ESMO Immuno-Oncology 2022 Congress, Dec 2022, Geneve - "Treatments response in non-small cell lung cancer patients according to BRCA status on liquid biopsy: A retrospective analysis." Provenzano L, Bottiglieri A, Spagnoletti A, ... Prelaj A. *IOTECH*. 16,1:100176, 2022. doi.org/10.1016/j.iotech.2022.100176.

Poster Presenter at ESMO MAP 2018 Congress, Sep 2018, Paris - "Oncogenes and cancer-associated thrombosis: Is there a rationale for using molecular findings to assess thromboembolic risk in cancer patients?" Provenzano L, Platania L; *Ann Onc*; 29, Suppl_6, 2018. 10.1093/annonc/mdy318.029.