



Giorgio Cazzaniga

Date of birth: 19/02/1995 | Nationality: Italian

WORK EXPERIENCE

01/05/2024 – CURRENT Milano - ASST Grande Ospedale Metropolitano Niguarda, Italy

PATHOLOGY RESIDENT UNIVERSITY OF MILANO-BICOCCA

Microscopic description and histopathological/cytopathological diagnosis
Execution of cytological samples with fine needle under ultrasound guidance (US-FNA)
Preparation and reporting of cases of intraoperative diagnosis
Macroscopic description and sampling of surgical pieces
Necroscopic diagnostic findings
Use of digital pathology platforms (AperioCS2, Hamamatsu Nanozoomer S60, 3DHISTECH MIDI II, EpreDia E1000)
Participation and management of cases in the GOI (Interdisciplinary Operational Groups)
Publication of scientific articles in indexed journals
Review of articles for international scientific journals

01/2021 – 04/2024 Monza - IRCCS Fondazione San Gerardo dei Tintori, Italy

PATHOLOGY RESIDENT UNIVERSITY OF MILANO-BICOCCA

01/05/2023 – 31/10/2023 Athens - Aretaieion University Hospital, Greece

PATHOLOGY FELLOW NATIONAL AND KAPODISTRIAN UNIVERSITY OF ATHENS

Pathology fellowship under the mentorship of Prof. Dina Tiniakos, specializing in hepatic pathology.

01/07/2021 – 31/12/2021 -ASST Papa Giovanni XXIII, Bergamo, Italy

PATHOLOGY RESIDENT UNIVERSITY OF MILANO-BICOCCA

01/01/2022 – 31/05/2022 CDI Centro Diagnostico Italiano, Milano

PATHOLOGY RESIDENT UNIVERSITY OF MILANO-BICOCCA

01/01/2022 – 01/02/2022 Vimercate, Italy

ADMINISTRATION OF COVID VACCINE ASST BRIANZA

01/11/2020 – 11/2020 Osnago-Cernusco Lombardone, Italy

PRIMARY CARE PHYSICIAN ASST BRIANZA

01/09/2021 – 31/01/2022 Barzanò, Italy

OCCUPATIONAL MEDICINE CAB-POLIDIAGNOSTICO

EDUCATION AND TRAINING

13/12/2023 – 17/02/2024

DEEP LEARNING SPECIALIZATION DeepLearning.AI

Website <https://www.coursera.org/specializations/deep-learning>

04/05/2023 – 18/07/2023

IBM DATA SCIENCE PROFESSIONAL CERTIFICATE IBM

Website <https://www.coursera.org/professional-certificates/ibm-data-science>

2014 – 2020 Milano, Italy

MASTER'S DEGREE IN MEDICINE AND SURGERY Università di Milano-Bicocca

Final grade 110L/100 | **Thesis** Transmission Electron Microscopy for the Diagnostic Workflow in Renal Pathology

01/01/2019 – 10/07/2020

TESIS INTERNSHIP Department of Pathology - Fondazione IRCCS San Gerardo dei Tintori

● **LANGUAGE SKILLS**

Mother tongue(s): **ITALIAN**
Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
ENGLISH	C1	C1	C1	C1	C1
SPANISH	C1	C1	C1	C1	C1

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

● **DIGITAL SKILLS**

Data Science

Frameworks & Libraries: OpenCV, Sci-kit learn, NumPy, Pandas, SciPy, Matplotlib.

Artificial Intelligence

Python programming | TensorFlow/Pytorch | Computer Vision | Natural Language Processing

Image Analysis

Quantitative Pathology & Bioimage Analysis (QuPath) | Fiji/ImageJ (Intermediate) | Image Processing, Image Analysis, Image Segmentation

● **HONOURS AND AWARDS**

13/09/2023
ECP 2023 Travel Grant – ESP - European Society of Pathology

Automated diagnostic coding (SNOMED-CT) from narrative pathology reports using natural language processing

● **NETWORKS AND MEMBERSHIPS**

Current Member

- European Society of Pathology (ESP)
- Società Italiana Anatomia Patologica (SIAPEC)
- European Association for the Study of the Liver (EASL)
- Associazione Italiana per lo Studio del Fegato (AISF)

● **PUBLICATIONS**

2024
[Not all stains are made equal: impact of stain normalization on prostate cancer diagnosis](#)

Cazzaniga, G., Caputo, A., L'Imperio, V., Gibilisco, F., Scotto, M., Pennis, O. M. A., Michielli, N., Mogetta, A., Molinari, F., Fraggetta, F., & Salvi, M. (2024). Pathologica <https://doi.org/10.32074/1591-951X-1008>

2024
[Deep Learning helps discriminating Autoimmune Hepatitis and Primary Biliary Cholangitis](#)

Deep Learning helps discriminating Autoimmune Hepatitis and Primary Biliary Cholangitis Gerussi, Alessio et al. JHEP Reports, Volume 0, Issue 0, 101198

2024
[Benchmarking digital displays \(monitors\) for histological diagnoses: the nephropathology use case](#)

Write here the descriptiCazzaniga G, Mascadri F, Marletta S, Caputo A, Guidi G, Gambaro G, Eccher A, Dei Tos AP, Pagni F, L'Imperio V. Benchmarking digital displays (monitors) for histological diagnoses: the nephropathology use case. J Clin Pathol. 2024 Mar 27:jcp-2024-209418. doi: 10.1136/jcp-2024-209418. Epub ahead of print. PMID: 38538076.on...
Journal of Clinical Pathology

2024
[Time for a full digital approach in nephropathology: a systematic review of current artificial intelligence applications and future directions](#)

Cazzaniga G, Rossi M, Eccher A, Girolami I, L'Imperio V, Van Nguyen H, Becker JU, Bueno García MG, Sbaraglia M, Dei Tos AP, Gambaro G, Pagni F. Time for a full digital approach in nephropathology: a systematic review of current artificial intelligence applications and future directions. *J Nephrol*. 2024 Jan;37(1):65-76. doi: 10.1007/s40620-023-01775-w. Epub 2023 Sep 28. PMID: 37768550; PMCID: PMC10920416.

Journal of Nephrology

2024

The Puzzle of Preimplantation Kidney Biopsy Decision-Making Process: The Pathologist Perspective

Eccher A, Becker JU, Pagni F, Cazzaniga G, Rossi M, Gambaro G, L'Imperio V, Marletta S. The Puzzle of Preimplantation Kidney Biopsy Decision-Making Process: The Pathologist Perspective. *Life (Basel)*. 2024 Feb 15;14(2):254. doi: 10.3390/life14020254. PMID: 38398762; PMCID: PMC10890315.

Life (Basel)

2024

Natural Language Processing to extract SNOMED-CT codes from pathological reports

Cazzaniga G, Eccher A, Munari E, Marletta S, Bonoldi E, Della Mea V, Cadei M, Sbaraglia M, Guerriero A, Dei Tos AP, Pagni F, L'Imperio V. Natural Language Processing to extract SNOMED-CT codes from pathological reports. *Pathologica*. 2023 Dec;115(6):318-324. doi: 10.32074/1591-951X-952. PMID: 38180139; PMCID: PMC10767798.

Pathologica

2024

Digital counting of tissue cells for molecular analysis: the QuANTUM pipeline

L'Imperio V, Cazzaniga G, Mannino M, Seminati D, Mascadri F, Ceku J, Casati G, Bono F, Eloy C, Rocco EG, Frascarelli C, Fassan M, Malapelle U, Pagni F. Digital counting of tissue cells for molecular analysis: the QuANTUM pipeline. *Virchows Arch*. 2024 Mar 26. doi: 10.1007/s00428-024-03794-9. Epub ahead of print. PMID: 38532196.on...

Virchows Archives

2024

Improvements in digital pathology equipment for renal biopsies: updating the standard model

L'Imperio V, Casati G, Cazzaniga G, Tarabini A, Bolognesi MM, Gibilisco F, Fraggetta F, Pagni F. Improvements in digital pathology equipment for renal biopsies: updating the standard model. *J Nephrol*. 2024 Jan;37(1):221-229. doi: 10.1007/s40620-023-01568-1. Epub 2023 Feb 14. PMID: 36786977.

Journal of Nephrology

2024

Digital Pathology Applications for PD-L1 Scoring in Head and Neck Squamous Cell Carcinoma: A Challenging Series

Canini V, Eccher A, d'Amati G, Fusco N, Maffini F, Lepanto D, Martini M, Cazzaniga G, Paliogiannis P, Lobrano R, L'Imperio V, Pagni F. Digital Pathology Applications for PD-L1 Scoring in Head and Neck Squamous Cell Carcinoma: A Challenging Series. *J Clin Med*. 2024 Feb 22;13(5):1240. doi: 10.3390/jcm13051240. PMID: 38592086; PMCID: PMC10932078.

Journal of Clinical Medicine

2024

Differential Expression of NOTCH-1 and Its Molecular Targets in Response to Metronomic Followed by Conventional Therapy in a Patient with Advanced Triple-Negative Breast Cancer

Ilari A, Cogliati V, Sherif N, Grassilli E, Ramazzotti D, Cordani N, Cazzaniga G, Di Bella C, Lavitrano M, Cazzaniga ME, Cerrito MG. Differential Expression of NOTCH-1 and Its Molecular Targets in Response to Metronomic Followed by Conventional Therapy in a Patient with Advanced Triple-Negative Breast Cancer. *Biomedicines*. 2024 Jan 25;12(2):272. doi: 10.3390/biomedicines12020272. PMID: 38397874; PMCID: PMC10886740.

Biomedicines

2023

Congo Red Staining in Digital Pathology: The Streamlined Pipeline for Amyloid Detection Through Congo Red Fluorescence Digital Analysis

Cazzaniga G, Bolognesi MM, Stefania MD, Mascadri F, Eccher A, Alberici F, Mescia F, Smith A, Fraggetta F, Rossi M, Gambaro G, Pagni F, L'Imperio V. Congo Red Staining in Digital Pathology: The Streamlined Pipeline for Amyloid Detection Through Congo Red Fluorescence Digital Analysis. *Lab Invest*. 2023 Nov;103(11):100243. doi: 10.1016/j.labinv.2023.100243. Epub 2023 Aug 25. PMID: 37634845.

Laboratory Investigation

2023

Spatial resolution of renal amyloid deposits through MALDI-MSI: a combined digital and molecular approach to monoclonal gammopathies

Bindi G, Smith A, Oliveira G, Eccher A, Vatrano S, Alberici F, Cazzaniga G, Galimberti S, Capitoli G, Magni F, Pagni F, L'Imperio V. Spatial resolution of renal amyloid deposits through MALDI-MSI: a combined digital and molecular approach to monoclonal gammopathies. J Clin Pathol. 2023 Feb 22:jcp-2023-208790. doi: 10.1136/jcp-2023-208790. Epub ahead of print. PMID: 36813560.

Journal of Clinical Pathology

2022

Lights on HBME-1: the elusive biomarker in thyroid cancer pathology

Cazzaniga G, Seminati D, Smith A, Piga I, Capitoli G, Garancini M, L'Imperio V, Fusco N, Pagni F. Lights on HBME-1: the elusive biomarker in thyroid cancer pathology. J Clin Pathol. 2022 Sep;75(9):588-592. doi: 10.1136/jclinpath-2022-208248. Epub 2022 Apr 20. PMID: 35444029.

Journal of Clinical Pathology

2022

Monoclonal Gammopathy of Renal Significance: A Molecular Middle Earth between Oncology, Nephrology, and Pathology

L'Imperio V, Cazzaniga G, Vergani B, Smith AJ, Alberici F, Pagni F. Monoclonal Gammopathy of Renal Significance: A Molecular Middle Earth between Oncology, Nephrology, and Pathology. Kidney Dis (Basel). 2022 Nov 2;8(6):446-457. doi: 10.1159/000527056. PMID: 36590677; PMCID: PMC9798844.

Kidney Disease (Basel)

2021

Digital pathology for the routine diagnosis of renal diseases: a standard model

L'Imperio V, Brambilla V, Cazzaniga G, Ferrario F, Nebuloni M, Pagni F. Digital pathology for the routine diagnosis of renal diseases: a standard model. J Nephrol. 2021 Jun;34(3):681-688. doi: 10.1007/s40620-020-00805-1. Epub 2020 Jul 18. PMID: 32683656; PMCID: PMC8192318.

Journal of Nephrology

2020

The spectrum of the cytopathological features of primary effusion lymphoma and human herpes virus 8-related lymphoproliferative disorders

Verga L, Leni D, Cazzaniga G, Crosta S, Seminati D, Rossi M, L'Imperio V, Pagni F. The spectrum of the cytopathological features of primary effusion lymphoma and human herpes virus 8-related lymphoproliferative disorders. Cytopathology. 2020 Nov;31(6):541-546. doi: 10.1111/cyt.12820. Epub 2020 May 21. PMID: 32171033.

Cytopathology

Scopus Publications Link

<https://www.scopus.com/authid/detail.uri?authorId=57216851382>
