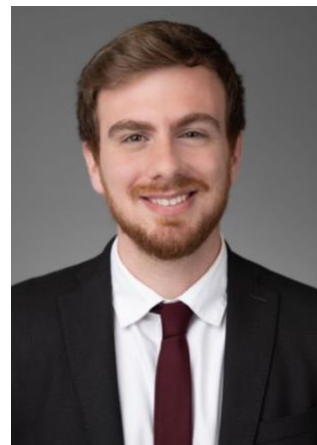


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Current position

Medical Oncologist: IRCCS Policlinico Sant'Orsola-Malpighi, Bologna, Italy

PhD student: Hematology, Oncology, and Pathology, University of Bologna, Italy.

Education and training

July 2011: Secondary School Diploma at Liceo Classico "G.B. Vico", Chieti, Italy.

September 2015–July 2016: Erasmus Fellowship at Universidad Complutense de Madrid, Hospital Clinico San Carlos, Madrid, Spain (1 year of medical school).

August 2016–September 2016: 1 month of medical school traineeship at Mother Theresa University Hospital, Skopje, North Macedonia.

17 October 2017: Degree in Medicine and Surgery at the University of Parma.
Thesis: "Impact of combined structural and immune features on NSCLC clinical outcome"
Final grade: 110/110 cum laude

13 February 2018: License to practice as Medical Doctor. Ordine dei Medici Chirurghi e degli Odontoiatri di Chieti, Italy.

November 2018–November 2023: Fellowship (residency) in Medical Oncology at IRCCS Azienda Ospedaliero-Universitaria di Bologna, S.Orsola-Malpighi Hospital, University of Bologna, Italy.
Mentor: Dr. Andrea Ardizzoni.

July 2022–June 2025: Research Fellowship (Visiting Scientist) at the Lowe Center for Thoracic Oncology, Dana-Farber Cancer Institute, Harvard Cancer Center, Boston, MA, USA.
Mentors: Dr. Mark M. Awad; Dr. Biagio Ricciuti.

December 2022–September 2023: 2023 Association for the Study of Lung Cancer (IASLC) Academy

June 2024: IHC Good Clinical Practice Certification

October 2024: Advanced Cardiac Life Support Certification

Language Skills

Italian: Mother tongue

English: Listening C2, Reading C2, Writing C2, Speaking C1

Spanish: Listening C2, Reading C2, Writing C1, Speaking C1 (DELE C1 certification)

Digital and Computational Skills

Advanced user of many software and informatic tools that can help my work as a clinician and researcher in oncology, such as R Studio, Prism, Review Manager (RevMan), Comprehensive Meta-Analysis, Microsoft Excel and the complete Microsoft Office package (Word, Power Point etc.), REDCap, Google Drive, Social Medias. Experience with working on online large genomic and clinicopathologic databases, such as cBioPortal, The Cancer Genome Atlas (TCGA), and GENIE, and with the use of informatic tools for cancer genomics, such as COSMIC, OncoKB, CiviC and VarSome. Access to the Surveillance, Epidemiology, and End Results (SEER) database.

Communication and Interpersonal Skills

Ability to communicate to individuals and groups, organize events, make presentations, and respond to questions in both educational and workplace settings. Skills developed during my medical school and my experiences abroad to study in Madrid (Erasmus Fellowship of one academic year during the med school) and Skopje, North Macedonia (1-month traineeship during the med school), during my work experience as a Medical Oncology Resident/Fellow and Fellows' representative at IRCCS Policlinico Sant'Orsola-Malpighi, as a research fellow at the Dana-Farber Cancer Institute (Boston, US), and during the International Association for the Study of Lung Cancer (IASLC) Academy 2023.

Reviewing and Editorial Activity

Grant reviewer for the International Association for the Study of Lung Cancer (IASLC).

Previously Associate Editor for Cancer Immunology, Immunotherapy. Review Editor for Frontiers in Oncology and Frontiers in Immunology. Invited Guest Editor for Diagnostics.

Ad-hoc reviewer for several highly impacted journals, including Journal of Thoracic Oncology, BMC Medicine, Critical Reviews in Oncology/Hematology, Nature Scientific Reports and Journal of Cancer Research and Clinical Oncology.

Active Memberships

Active member of the European Society for Medical Oncology (ESMO), International Association for the Study of Lung Cancer (IASLC), and Society for Immunotherapy of Cancer (SITC).

Activity in International Oncology Societies

I am currently a Career Development Committee member in the International Association for the Study of Lung Cancer (IASLC) with a 2-year mandate until end of 2025. I served as the ESMO Immuno-Oncology conference 2023 meeting correspondent for the Society for Immunotherapy of Cancer (SITC).

Peer-reviewed publications

(*co-first authorship; *corresponding authorship)

1. **Di Federico A**, Filippini DM, Dall'Olio FG, et al. The EGFR Exon 19 Mutant L747-A750>P Exhibits Distinct Sensitivity to Tyrosine Kinase Inhibitors in Lung Adenocarcinoma-Letter. Clin Cancer Res. 2020;26(2):518-519. doi:10.1158/1078-0432.CCR-19-2441

2. Gelsomino F, **Di Federico A**, Filippini DM, et al. Overcoming Primary Resistance to PD-1 Inhibitor With Anti-PD-L1 Agent in Squamous-Cell NSCLC: Case Report. Clin Lung Cancer. 2020;21(2):e45-e48. doi:10.1016/j.clcc.2019.11.011

3. Lamberti G, Andrini E, Sisi M, **Di Federico A**, Ricciuti B. Targeting DNA damage response and repair genes to enhance anticancer immunotherapy: rationale and clinical implication. Future Oncol. 2020;16(23):1751-1766. doi:10.2217/fon-2020-0215

4. Dall'Olio FG, Conci N, Rossi G, Fiorentino M, De Giglio A, Grilli G, Altimari A, Gruppioni E, Filippini DM, **Di Federico A**, Nuvola G, Ardizzoni A. Comparison of Sequential Testing and Next Generation Sequencing in advanced Lung Adenocarcinoma patients – A single centre experience. *Lung Cancer*. Published online 2020. doi:10.1016/j.lungcan.2020.08.008
5. Lamberti G, Andrini E, Sisi M, Rizzo A, Parisi C, **Di Federico A**, Gelsomino F, Ardizzoni A. Beyond EGFR, ALK and ROS1: current evidence and future perspectives on newly targetable oncogenic drivers in lung adenocarcinoma. *Crit Rev Oncol Hematol*. Published online 2020. doi:10.1016/j.critrevonc.2020.103119
6. **Di Federico A***, Nuvola G, Sisi M, Lenzi B, Nobili E, Campana D. Hyperammonemic encephalopathy during XELOX regimen. Is it capecitabine or oxaliplatin responsible? *Anticancer Drugs*. Published online 2020. doi:10.1097/cad.0000000000000987
7. Rizzo A, **Di Federico A**, Ricci AD, et al. Targeting BRAF-Mutant Biliary Tract Cancer: Recent Advances and Future Challenges. *Cancer Control*. 2020 Jan-Dec;27(1):1073274820983013. doi: 10.1177/1073274820983013. PMID: 33356500.
8. Di Marco M, Carloni R, De Lorenzo S, Mosconi C, Palloni A, Grassi E, Filippini DM, Ricci AD, Rizzo A, **Di Federico A**, et al. Pancreatic mucinous cystadenocarcinoma in a patient harbouring BRCA1 germline mutation effectively treated with olaparib: A case report. *World J Gastrointest Oncol*. 2020 Dec 15;12(12):1456-1463. doi: 10.4251/wjgo.v12.i12.1456. PMID: 33362915; PMCID: PMC7739147.
9. **Di Federico A**, Rizzo A, Ricci AD, Frega G, Palloni A, Tavolari S, Brandi G. Nivolumab: an investigational agent for the treatment of biliary tract cancer. *Expert Opin Investig Drugs*. 2020 Dec 23:1-8. doi: 10.1080/13543784.2021.1863946. Epub ahead of print. PMID: 33307866.
10. **Di Federico A**, Andrini E, Sisi M, et al. Single-agent carboplatin in extensive disease small-cell lung cancer patient with liver failure: a case report within the experience of a single institution. *Anticancer Drugs*. 2021 Mar 1. doi: 10.1097/CAD.0000000000001057. Epub ahead of print. PMID: 33661187.
11. **Di Federico A***, Filippini DM, Sperandi F, Ardizzoni A, Melotti B. Acute kidney injury as a possible immune-related adverse event associated with sustained complete response to BRAF and MEK inhibitors in advanced, V600E-mutated melanoma. *Eur J Cancer*. 2021 Feb 19;147:58-59. doi: 10.1016/j.ejca.2021.01.026. Epub ahead of print. PMID: 33618198.
12. **Di Federico A***, De Giglio A, Parisi C, Gelsomino F, Ardizzoni A. PD-1/PD-L1 inhibitor monotherapy or in combination with chemotherapy as upfront treatment for advanced NSCLC with PD-L1 expression $\geq 50\%$: selecting the best strategy, *Critical Reviews in Oncology/Hematology*, 2021, 103302, ISSN 1040-8428, <https://doi.org/10.1016/j.critrevonc.2021.103302>.
13. Rizzo A, Ricci AD, Frega G, **Di Federico A**, Brandi G. FGFR inhibitors in elderly patients with advanced biliary tract cancer: an unsolved issue. *Expert Rev Gastroenterol Hepatol*. 2021 Apr 5:1-8. doi: 10.1080/17474124.2021.1911646. Epub ahead of print. PMID: 33787429.
14. **Di Federico A***, Nuvola G, Deiana C, Donati G, De Giglio A. IMpower 132: Is the Second Exception to the Rule No Longer an Exception? *J Thorac Oncol*. 2021 May;16(5):e29-e30. doi: 10.1016/j.jtho.2021.01.003. PMID: 33896575.
15. Rossi S, Merli E, Rinaldi R, Deleonardi G, Mastrangelo V, Sasdelli AS, **Di Federico A**, et al. Paraneoplastic vs. non-paraneoplastic anti-Hu associated dysmotility: a case series and literature review. *J Neurol*. 2022 Mar;269(3):1182-1194. doi: 10.1007/s00415-021-10577-8. Epub 2021 May 2. PMID: 33934212.
16. Filippini DM, **Di Federico A***, Lenzi B, Nobili E, Brocchi S, Malvi D, Brandi G. Critical diagnostic delay associated with unusual presentation of hepatocellular carcinoma (HCC) with orbital metastases: a case

report. *Ann Palliat Med*. 2021 May 11;apm-20-2331. doi: 10.21037/apm-20-2331. Epub ahead of print. PMID: 33977731.

17. Rizzo A, Dadduzio V, Ricci AD, Massari F, **Di Federico A**, Gadaleta-Caldarola G, Brandi G. Lenvatinib plus pembrolizumab: the next frontier for the treatment of hepatocellular carcinoma? *Expert Opin Investig Drugs*. 2021 Jun 30;1-8. doi: 10.1080/13543784.2021.1948532. Epub ahead of print. PMID: 34167433.

18. **Di Federico A**, Tateo V, Parisi C, et al. Hacking Pancreatic Cancer: Present and Future of Personalized Medicine. *Pharmaceuticals*. 2021; 14(7):677. <https://doi.org/10.3390/ph14070677>

19. **Di Federico A**, De Giglio A, Parisi C, Gelsomino F, Boni L, Ardizzoni A. PD-1 inhibitors versus PD-L1 inhibitors in addition to chemotherapy for the first-line treatment of advanced non-small cell lung cancer (NSCLC): a systematic review and meta-analysis. *JTO Clin Res Reports*. Published online 2021:100214. doi:<https://doi.org/10.1016/j.jtocrr.2021.100214>

20. Brandi G, **Di Federico A***, Rizzo A, et al. The power of kindness: curative treatment with metronomic combination in advanced hepatocellular carcinoma. *Anticancer Drugs*. 2022;33(1):e781-e783. doi:10.1097/CAD.0000000000001202

21. **Di Federico A***, De Giglio A, Nuvola G, Deiana C, Conci N, Gelsomino F, Ardizzoni A. PD-(L)1 inhibitors as single-agent or in combination with chemotherapy for advanced, PD-L1-high non-small cell lung cancer: a meta-analysis. *Future Oncol*. 2021 Nov;17(32):4415-4424. doi: 10.2217/fon-2021-0328. Epub 2021 Aug 17. PMID: 34402681.

22. De Giglio A, **Di Federico A**, Gelsomino F, Ardizzoni A. Prognostic relevance of pleural invasion for resected NSCLC patients undergoing adjuvant treatments: A propensity score-matched analysis of SEER database. *Lung Cancer*. 2021 Nov;161:18-25. doi: 10.1016/j.lungcan.2021.08.017. Epub 2021 Sep 2. PMID: 34492552.

23. **Di Federico A**, Gelsomino F, De Biase D, Ardizzoni A. Should We Test Cancer Susceptibility Genes in Routinely Used Multigene Panels? A Case of Synchronous Lung Adenocarcinoma and Breast Cancer Associated With Germline CHEK2 Mutation. *Clin Lung Cancer*. 2022 Jun;23(4):e283-e284. doi: 10.1016/j.clcc.2021.09.011. Epub 2021 Oct 10. PMID: 34772625.

24. De Giglio A, **Di Federico A**, Nuvola G, Deiana C, Gelsomino F. The Landscape of Immunotherapy in Advanced NSCLC: Driving Beyond PD-1/PD-L1 Inhibitors (CTLA-4, LAG3, IDO, OX40, TIGIT, Vaccines). *Curr Oncol Rep*. 2021 Aug 27;23(11):126. doi: 10.1007/s11912-021-01124-9. PMID: 34453261; PMCID: PMC8397682.

25. **Di Federico A***, De Giglio A, Parisi C, Gelsomino F. STK11/LKB1 and KEAP1 mutations in non-small cell lung cancer: Prognostic rather than predictive? *Eur J Cancer*. 2021 Nov;157:108-113. doi: 10.1016/j.ejca.2021.08.011. Epub 2021 Sep 6. PMID: 34500370.

26. **Di Federico A***, Rizzo A, Carloni R, De Giglio A, Bruno R, Ricci D, Brandi G. Atezolizumab-bevacizumab plus Y-90 TARE for the treatment of hepatocellular carcinoma: preclinical rationale and ongoing clinical trials. *Expert Opin Investig Drugs*. 2022 Apr;31(4):361-369. doi: 10.1080/13543784.2022.2009455. Epub 2021 Dec 1. PMID: 34798793.

27. Rizzo A, Ricci AD, Lanotte L, Lombardi L, **Di Federico A**, Brandi G, Gadaleta-Caldarola G. Immune-based combinations for metastatic triple negative breast cancer in clinical trials: current knowledge and therapeutic prospects. *Expert Opin Investig Drugs*. 2022 Jun;31(6):557-565. doi: 10.1080/13543784.2022.2009456. Epub 2021 Dec 13. PMID: 34802383.

28. Rizzo A, Ricci AD, **Di Federico A**, Frega G, Palloni A, Tavolari S, Brandi G. Predictive Biomarkers for Checkpoint Inhibitor-Based Immunotherapy in Hepatocellular Carcinoma: Where Do We Stand? *Front Oncol*. 2021 Dec 17;11:803133. doi: 10.3389/fonc.2021.803133. PMID: 34976841; PMCID: PMC8718608.
29. Rizzo A, **Di Federico A**, Palmiotti G, Brandi G. Ramucirumab or merestinib in biliary tract cancer: new combinations, old mistakes? <https://doi.org/10.1080/23808993.2022.2095903>. 2022;7(1):60-61. doi:10.1080/23808993.2022.2095903
30. **Di Federico A**, Filetti M, Palladini A, Giusti R, Piras M, De Giglio A, Ardizzoni A, Gelsomino F. EGFR-RAD51 gene fusion NSCLC responsiveness to different generation EGFR-TKIs: two cases and review of the literature. *Transl Lung Cancer Res*. 2022 Mar;11(3):497-503. doi: 10.21037/tlcr-21-888. PMID: 35399574; PMCID: PMC8988076.
31. Gelsomino F, **Di Federico A**, Tardio ML, Grilli G, D'Errico A, Ardizzoni A, Salvagni S. Drug-induced colitis on BRAF and MEK inhibitors for BRAF V600E-mutated non-small cell lung cancer: a case report. *Invest New Drugs*. 2022 Feb;40(1):190-193. doi: 10.1007/s10637-021-01166-7. Epub 2021 Aug 26. PMID: 34436699; PMCID: PMC8763820.
32. Carloni R, Rizzo A, Ricci AD, Frega G, **Di Federico A**, Palloni A, Marco MD, Gadaleta-Caldarola G, Brandi G. Dual immune checkpoint blockade in hepatocellular carcinoma: where do we stand? *Future Oncol*. 2022 Mar;18(8):1023-1034. doi: 10.2217/fon-2021-0905. Epub 2022 Feb 3. PMID: 35109664.
33. De Giglio A, Deiana C, **Di Federico A**. Bone-specific response according to MDA criteria predicts immunotherapy efficacy among advanced non-small cell lung cancer (NSCLC) patients. *J Cancer Res Clin Oncol*. 2022 Jun 24. doi: 10.1007/s00432-022-04120-z. Epub ahead of print. PMID: 35750899.
34. **Di Federico A**⁺, Mosca M, Pagani R, et al. Immunotherapy in Pancreatic Cancer: Why Do We Keep Failing? A Focus on Tumor Immune Microenvironment, Predictive Biomarkers and Treatment Outcomes. *Cancers (Basel)*. 2022 May 14;14(10):2429. doi: 10.3390/cancers14102429. PMID: 35626033; PMCID: PMC9139656.
35. De Giglio A, **Di Federico A**, Deiana C, Ricciuti B, Brambilla M, Metro G. Advanced non-small-cell lung cancer: how to manage non-oncogene disease. *Drugs Context*. 2022 Jul 8;11:2022-2-4. doi: 10.7573/dic.2022-2-4. PMID: 35912001; PMCID: PMC9281971.
36. **Di Federico A**⁺, De Giglio A, Gelsomino F, et al. Genomic Landscape, Clinical Features and Outcomes of Non-Small Cell Lung Cancer Patients Harboring BRAF Alterations of Distinct Functional Classes. *Cancers (Basel)*. 2022 Jul 17;14(14):3472. doi: 10.3390/cancers14143472. PMID: 35884534; PMCID: PMC9319412.
37. Rizzo A, Carloni R, Frega G, Palloni A, **Di Federico A**, et al. Intensive Follow-Up Program and Oncological Outcomes of Biliary Tract Cancer Patients after Curative-Intent Surgery: A Twenty-Year Experience in a Single Tertiary Medical Center. *Curr Oncol*. 2022 Jul 19;29(7):5084-5090. doi: 10.3390/curroncol29070402. PMID: 35877262; PMCID: PMC9322137.
38. Metro G, De Giglio A, Ricciuti B, Siringo M, Marinelli D, Gelibter A, Pecci F, Berardi R, Cantini L, **Di Federico A**, et al. Advanced non-small-cell lung cancer: how to manage EGFR and HER2 exon 20 insertion mutation-positive disease. *Drugs Context*. 2022 Jul 29;11:2022-3-9. doi: 10.7573/dic.2022-3-9. PMID: 35975031; PMCID: PMC9354707.
39. Rizzo A, Carloni R, Ricci AD, **Di Federico A**, Guven DC, Yalcin S, Brandi G. Molecular Profile and Prognostic Value of BAP1 Mutations in Intrahepatic Cholangiocarcinoma: A Genomic Database Analysis. *J Pers Med*. 2022 Jul 29;12(8):1247. doi: 10.3390/jpm12081247. PMID: 36013199; PMCID: PMC9410256.

40. Carloni R, Rizzo A, Cusmai A, Palloni A, **Di Federico A**, Marco MD, Massafra R, Fanizzi A, Palmiotti G, Brandi G. Advances in novel systemic therapies for advanced hepatocellular carcinoma. *Future Med Chem*. 2022 Aug 23. doi: 10.4155/fmc-2022-0045. Epub ahead of print. PMID: 35997677.
41. Carloni R, Rizzo A, Ricci AD, **Di Federico A**, De Luca R, Guven DC, Yalcin S, Brandi G. Targeting tumor microenvironment for cholangiocarcinoma: Opportunities for precision medicine. *Transl Oncol*. 2022 Aug 14;25:101514. doi: 10.1016/j.tranon.2022.101514. Epub ahead of print. PMID: 35977458; PMCID: PMC9396390.
42. Bian D, Jiang S, Xiong Y, Qi M, Wu J, Addeo A, Yamauchi Y, Manapov F, Dempke WCM, Vannucci J, **Di Federico A**, Xu X, Chen L. Efficacy evaluation of surgery combined with chemotherapy for stage IIIA small cell lung cancer patients: a retrospective analysis. *Transl Lung Cancer Res*. 2022;11(8):0-0. doi:10.21037/TLCR-22-545
43. De Giglio A, **Di Federico A**, Metro G. Exploring immune checkpoint inhibition in combination with anti-angiogenic therapy for patients with EGFR- or ALK-positive advanced non-small cell lung cancer. *Transl Lung Cancer Res*. 2022;0(0):0-0. doi:10.21037/TLCR-22-492
44. De Giglio A, Aprile M, **Di Federico A**, et al. Impact of Baseline Versus Intercurrent Steroids Administration on Upfront Chemo-Immunotherapy for Advanced Non-Small Cell Lung Cancer (NSCLC). *Int J Mol Sci* 2022, Vol 23, Page 10292. 2022;23(18):10292. doi:10.3390/IJMS231810292
45. Rizzo A, Salati M, Frega G, Merz V, Caputo F, **Di Federico A**, et al. Second-Line Chemotherapy in Elderly Patients with Advanced Biliary Tract Cancer: A Multicenter Real-World Study. *Med* 2022, Vol 58, Page 1543. 2022;58(11):1543. doi:10.3390/MEDICINA58111543
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efficacy of first-line chemoimmunotherapy in advanced non-small cell lung cancer (NSCLC). *Journal of Thoracic Oncology*, 0(0). <https://doi.org/10.1016/J.JTHO.2023.01.091>

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Speaker activity

- RAS Searchlight Network quarter meetings.
- IASLC World Conference on Lung Cancer 2023, Singapore. Mini oral presentation of the study titled: "Association of TTF-1 expression with outcomes to immunotherapy and KRAS G12C inhibition in lung adenocarcinoma".
- O.P.E.R.A. Lung, 2024
- European Society of Medical Oncology (ESMO) podcast, 2024

Awards

- 2023 International Association for the Study of Lung Cancer (IASLC) Academy
- IASLC Targeted Therapies of Lung Cancer Meeting Education Award (2023 and 2025)
- Fondazione F. Calabresi Onlus Award - conference "Grandangolo 2023"
- European Lung Cancer Conference (ELCC) 2024 Merit Travel Award