

CURRICULUM VITAE

Federica DI NICOLANTONIO, PhD

Nationality: Italian

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Google Scholar: <https://scholar.google.com/citations?user=KjvCAwgAAAAJ&hl=en>

Web: <https://www.oncology.unito.it/do/docenti.pl/Show? id=fdinicol#tab-profilo>

[https://www.researchgate.net/profile/Federica Di Nicolantonio](https://www.researchgate.net/profile/Federica_Di_Nicolantonio)

<https://www.irccs.org/cancer-epigenetics>

Twitter: <https://twitter.com/fdinicolantonio>

• CURRENT POSITIONS

2018– Associate Professor in Biochemistry
Department of Oncology, University of Torino, Torino, Italy.

2015 – Group Leader, Laboratory of Cancer Epigenetics
<https://www.irccs.org/cancer-epigenetics>
Candiolo Cancer Institute – FPO, IRCCS, Torino, Italy.

• PREVIOUS POSITIONS

2016–2018 Senior Lecturer in Clinical Biochemistry and Clinical Molecular Biology
Department of Oncology, University of Torino, Torino, Italy.

2012 – 2016 Junior Lecturer in Clinical Biochemistry and Clinical Molecular Biology
Department of Oncology, University of Torino, Torino, Italy.

2012 – 2014 Junior Group Leader, Laboratory of Pharmacogenomics
Candiolo Cancer Institute – FPO, IRCCS, Torino, Italy.

• EDUCATION and TRAINING

2005 – 2011: Post-doctoral training, Candiolo Cancer Institute, IRCCS, Torino, Italy.

2003 – 2004: Research Associate, Queen Alexandra Hospital, University of Portsmouth, UK

2000 – 2004: Doctor of Philosophy in Medicine (Clinical Sciences), University College London.

Thesis: Multidrug resistance in solid tumors <http://discovery.ucl.ac.uk/1354622/>

1999: PharmD, School of Pharmacy, University of Torino, Italy.

- **AWARDS and FELLOWSHIPS**

- 2021 – 2031 National scientific qualification for the calls in the role of **full professor** in **General Biochemistry**
- 2018 – 2028 National scientific qualification for the calls in the role of **full professor** in **Clinical Biochemistry and Molecular Biology**
- 2019 Order of merit of the Italian Republic: recipients of Officer award
- 2011 Award, Andrea and Libi Lorini Foundation, Milan for the article Di Nicolantonio F et al., J Clin Oncol. 2008 Dec 10;26(35):5705-12
- 2010 – 2011 2-year-FIRC- Fellowship, IFOM-FIRC, Milan, Italy

- **SUPERVISION OF GRADUATE STUDENTS AND POSTDOCTORAL FELLOWS**

- 2013 – An assistant Professor, 8 Postdocs, 4 PhD Students, 8 Master Students
Department of Oncology, University of Torino, Torino, Italy.

- **TEACHING ACTIVITIES**

- 2019 – Lecturer in Biochemistry – Medical School, University of Torino, Italy
- 2014 – Lecturer in Biochemistry and Molecular Biology– Medical School, University of Torino, Italy
- 2013 – 2020 Lecturer in Biochemistry – Nursing School, University of Torino, Italy

- **ORGANISATION OF SCIENTIFIC MEETINGS**

- 2023 ESMO Congress, Program Committee member for Basic and Translational Research
- 2022 ESMO Advanced Course on Biomarkers for Precision Medicine, Singapore
- 2022 ESMO Congress, Program Committee member for Basic and Translational Research, Paris, France
- 2021 ESMO Advanced Course on Biomarkers for Precision Medicine, Zurich, Switzerland
- 2018 AACR annual meeting, Program Committee member for session ‘Liquid Biopsies’
- 2015 AACR annual meeting, Program Committee member for session ‘Targeted Therapies’
- 2014 39th ESMO Congress Madrid meeting, Program Committee member for session “Gastrointestinal (colorectal) cancer” -
- 2013 AACR annual meeting, Abstract reviewer for sections CL13-01 Diagnostic/early detection biomarkers; CL13-02 Prognostic/ metastasis biomarkers; CL13-03 Biomarkers predictive of therapeutic benefit
- 2011 SIC – Italian Society for Cancerology – Annual Meeting, Torino. Member of the Local organizing committee.

- **INSTITUTIONAL RESPONSIBILITIES**

- 2023 - Member of the Executive Board, Department of Oncology, University of Torino, Italy (served also during the term 2017-2021).
- 2016 –2018 Member of the Teaching Committee, Department of Oncology, University of Torino, Italy
- 2013 – Faculty Member of the PhD Programme in Molecular Medicine, University of Torino, Italy
- 2013 – Graduate Student Advisor, University of Torino, Italy

- **Participation to Boards of Scientific Societies and/or Institutions**

- 2021 –ESMO faculty member for the Translational Research faculty group for 2021-2025
- 2020 – Member of the Executive Board, Italian Cancer Society (SIC), Italy
- 2012 – Scientific Committee Member, Fondazione Oncologia Ca' Granda ONLUS (OCGO), Milan, Italy

- **REVIEWING ACTIVITIES**

- 2011 – Associate Editor, Clinical Cancer Research, AACR
- 2020 - Editorial Board, Cancers; MDPI
- 2011 – 2019 Review Editor, Frontiers in Oncology
- 2010 – 2019 Editorial Board, BMC Cancer; BioMed Central
- 2017 – 2021 Molecular Cancer

- 2015 Grant Reviewer for National Institute of Health Carlos III
- 2016 Grant Reviewer for Swiss Cancer League
- 2015 – 2017 Grant Reviewer, ERC Starting Grant 2016
- 2016 Grant Reviewer for National Institute of Health Carlos III
- 2018 Grant Reviewer, Belgian Fondation contre le Cancer
- 2021 Grant Reviewer, FWO-Research-Project, European Science Foundation
- 2021 Grant Reviewer, Inserm, France
- 2022 Grant Reviewer, Deutsche Forschungsgemeinschaft, German Research Foundation
- 2021-22-23 Grant Reviewer, Slovak Research and Development Agency (APVV).

- **MEMBERSHIPS OF SCIENTIFIC SOCIETIES**

- 2002 – Member, American Association for Cancer Research (Member ID 88803); AACR Associate member from 12 Dec 2002 to 18 Feb 2013; AACR Active member since 19 Feb 2013
- 2014 – Member, European Association for Cancer Research (Member #3667)
- 2017 – Invited Member, Cancer Epigenetics Society (<https://ces.b2sq.org>)
- 2020 - Executive board member, Italian Cancer Society (SIC, by election)
- 2021 - ESMO faculty member for the Translational Research faculty group for the period 2021 - 2025

CURRENT or PREVIOUS FUNDING

Funding source	Italian Ministry of Health PNRR
Project Title	Alfeo pilot study: High-dose vitamin C to enhance neoadjuvant immune checkpoint therapy in mismatch repair proficient colorectal cancer
Period	2023 - 2025
Role of the PI	Group Leader
Funding source	EU-TRANSCAN
Project Title	Early detection of relapses in stage III colon cancer patients by longitudinally following a personalized molecular signature from a blood test: THRuST
Period	01/04/2018 – 31/03/2023
Role of the PI	Group Leader
Funding source	AIRC Investigator Grant (IG) n.17707
Project Title	Resistance to BRAF combination therapies in BRAF mutant colorectal cancer
Period	02/01/2016-01/07/2019
Role of the PI	Coordinator
Funding source	AIRC Investigator Grant (IG) n.21407
Project Title	Methylation based liquid biopsy to predict molecular residual disease and risk of recurrence in colon cancer patients
Period	02/01/2019-31/12/2023
Role of the PI	Coordinator
Funding source	AIRC Special Call 5x1000 Metastatic disease: the key unmet need in oncology 2018
Project Title	Insights into the evolving heterogeneity of metastatic colorectal cancer: from mechanisms to therapies. Grant ID # 2109.
Period	01/07/2018-30/06/2025
Role of the PI	Group Leader
Funding source	FPRC 5x1000
Project Title	Epigenetics of colorectal cancer
Period	2018-2020
Role of the PI	Group Leader

MAJOR RESEARCH ACHIEVEMENTS

I have been active in cancer research for almost 20 years, throughout which I have demonstrated an established record of accomplishments in the field of translational

oncology. My research interests have always been inspired by the observation that the 'one-size-fits-all' approach should not be applied to treat cancers of the same histological type; since tumors affecting the same tissue often display individual and peculiar morphological and molecular features. My studies on the molecular mechanisms of cell transformation have been consistently aimed at identifying individualized targets amenable for therapeutic intervention as well as cancer prognostic and/or predictive biomarkers. First as a PhD student in Ian Cree's laboratory at UCL (now in Lyon, France, as the Head of the WHO/IARC Classification of Tumors (WCT) group), then as a post-doctoral fellow in Alberto Bardelli's lab, and finally as an independent investigator at the Candiolo Cancer Institute, I have shown that it is possible to deliver precision cancer medicine by coupling tumor molecular profiling with functional studies in clinically relevant preclinical models.

My research contributed to establish that activated RAS-BRAF signalling can bypass EGFR targeted inhibition in metastatic colorectal cancer, a notion that led to restricting the use of EGFR targeted monoclonal antibodies to RAS wild-type metastatic colorectal cancer patients. In this regard, I am the leading author of a highly cited manuscript that first described BRAF V600E mutations as a biomarker of adverse prognosis and of resistance to EGFR targeted therapies in metastatic colorectal cancer patients (Di Nicolantonio F et al., J Clin Oncol. 2008 Dec 10;26(35):5705-12).

In the same field, I contributed as a co-first author to the discovery that lack of efficacy of BRAF inhibitors could be mediated by feedback re-activation EGFR in colon tumors, and proved that combinations of EGFR and BRAF inhibitors were effective in restraining growth of BRAF mutant colorectal cancer xenografts (Prahallad A*, Sun C*, Huang S*, Di Nicolantonio F*. (...) Bernardini R. Nature. 2012; 483(7387):100-3). My publications in the field spurred several editorials and commentaries highlighting the clinical relevance of our results. More importantly, my preclinical works have also provided the rationale for the design of clinical trials testing BRAF and EGFR inhibitor combinations in BRAF mutant metastatic colorectal cancer patients. My laboratory has recently shown that it possible to individualize treatment of BRAF mutant metastatic colorectal cancer patients, by studying mechanisms of primary and acquired resistance to molecularly targeted agents in tumor samples as well as in liquid biopsies (Pietrantonio F., (...) Di Nicolantonio F. Cancer Discov. 2016 Sep;6(9):963-71 Oddo D., (...) Di Nicolantonio F. Cancer Res. 2016 Aug 1;76(15):4504-15).

I have more recently developed an interest in epigenetics of colorectal cancer, since methylation changes can serve as tumor-specific changes for monitoring tumor burden in plasma circulating tumor DNA, as well as modifiers of drug response. In this regard, my team has implemented a digital PCR based assay to provide a quantitative assessment of MGMT methylation in tissue and liquid biopsies for prediction of response to alkylating agents in advanced CRC patients (Barault L., (...) Di Nicolantonio F. Ann Oncol. 2015;26(9):1994-9). We have

completed genome-wide assessment of DNA methylation of a collection of over 200 colorectal cancer cell lines and compared it to normal mucosa and blood cells, in order to define a highly specific and sensitive gene methylation signature to be employed in liquid biopsy tests. We have evidence that assessment of methylated markers in cell-free circulating DNA allows non-invasive monitoring of disease burden in metastatic colorectal cancer patients. Methylation changes over time correlate with tumor response evaluated by CT-scan in patients treated with chemotherapy or targeted agents (Barault L., (...) Di Nicolantonio F Gut, 2018.).

Publications

I have co-authored more than 120 peer-reviewed publications in internationally recognized journals (H-index= 56). A complete list of publications can be found on:

<https://www.ncbi.nlm.nih.gov/pubmed/?term=Di+Nicolantonio+F>

Clarivate Analytics (formerly The Institute for Scientific Information (ISI), Philadelphia) has listed Dr. Di Nicolantonio as a 2018 Highly Cited researcher for her multidisciplinary research.

I am a member of the “Group 2003” that includes the most cited Italian scientists in different fields.

Selected publications

1. **Di Nicolantonio F**, Vitiello PP, Marsoni S, Siena S, Tabernero J, Trusolino L, Bernards R, Bardelli A. Precision oncology in metastatic colorectal cancer - from biology to medicine. *Nat Rev Clin Oncol*. 2021 Aug;18(8):506-525. doi: 10.1038/s41571-021-00495-z. Epub 2021 Apr 16. PMID: 33864051
2. Magri A, Germano G, Lorenzato A, Lamba S, Chilà R, Montone M, Amodio V, Ceruti T, Sassi F, Arena S, Abrignani S, D'Incalci M, Zucchetti M, Di Nicolantonio F*, Bardelli A. High-dose vitamin C enhances cancer immunotherapy. *Sci Transl Med*. 2020 Feb 26;12(532):eaay8707. doi: 10.1126/scitranslmed.aay8707. PMID: 32102933 ***co-last author and corresponding author**
3. Arena S, Corti G, Durinikova E, Montone M, Reilly NM, Russo M, Lorenzato A, Arcella P, Lazzari L, Rospo G, Pagani M, Cancelliere C, Negrino C, Isella C, Bartolini A, Cassingena A, Amatu A, Mauri G, Sartore-Bianchi A, Mittica G, Medico E, Marsoni S, Linnebacher M, Abrignani S, Siena S, Di Nicolantonio F, Bardelli A. A Subset of Colorectal Cancers with Cross-Sensitivity to Olaparib and Oxaliplatin. *Clin Cancer Res*. 2020 Mar 15;26(6):1372-1384. doi: 10.1158/1078-0432.CCR-19-2409. Epub 2019 Dec 12. PMID: 31831554 (**corresponding author**).
4. Russo M, Crisafulli G, Sogari A, Reilly NM, Arena S, Lamba S, Bartolini A, Amodio V, Magri A, Novara L, Sarotto I, Nagel ZD, Pieltz CG, Amatu A, Sartore-Bianchi A, Siena S, Bertotti A, Trusolino L, Corigliano M, Gherardi M, Lagomarsino MC, **Di Nicolantonio F**, Bardelli. Adaptive mutability of colorectal cancers in response to targeted therapies. *Science*. 2019 Dec 20;366(6472):1473-1480. doi: 10.1126/science.aav4474. PMID: 31699882
5. Corti G, Bartolini A, Crisafulli G, Novara L, Rospo G, Montone M, Negrino C, Mussolin B, Buscarino M, Isella C, Barault L, Siravegna G, Siena S, Marsoni S, **Di Nicolantonio F**, Medico E, Bardelli A. A Genomic Analysis Workflow for Colorectal Cancer Precision Oncology. *Clin Colorectal Cancer*. 2019 Mar 7. pii: S1533-0028(18)30588-7. doi: 10.1016/j.clcc.2019.02.008. PMID: 30981604 (**corresponding author**).
6. Rizzolio S, Cagnoni G, Battistini C, Bonelli S, Isella C, Van Ginderachter JA, Bernards R, **Di**

- Nicolantonio F**, Giordano S, Tamagnone L. Neuropilin-1 upregulation elicits adaptive resistance to oncogene-targeted therapies. *J Clin Invest*. 2018 Aug 31;128(9):3976-3990. doi: 10.1172/JCI99257. Epub 2018 Aug 13. PMID: 29953416
7. Russo M, Lamba S, Lorenzato A, Sogari A, Corti G, Rospo G, Mussolin B, Montone M, Lazzari L, Arena S, Oddo D, Linnebacher M, Sartore-Bianchi A, Pietrantonio F, Siena S, **Di Nicolantonio F**, Bardelli A. Reliance upon ancestral mutations is maintained in colorectal cancers that heterogeneously evolve during targeted therapies. *Nat Commun*. 2018 Jun 12;9(1):2287. doi: 10.1038/s41467-018-04506-z. PubMed PMID: 29895949
 8. Riganti C, Lingua MF, Salaroglio IC, Falcomatà C, Righi L, Morena D, Picca F, Oddo D, Kopecka J, Pradotto M, Libener R, Orecchia S, Bironzo P, Comunanza V, Bussolino F, Novello S, Scagliotti GV, **Di Nicolantonio F**, Taulli R. Bromodomain inhibition exerts its therapeutic potential in malignant pleural mesothelioma by promoting immunogenic cell death and changing the tumor immune-environment. *Oncolimmunology*, 2018; 7(3): Article: e1398874 *co-senior author and corresponding author
 9. Pietrantonio F, **Di Nicolantonio F**, Schrock AB, Lee J, Tejpar S, Sartore-Bianchi A, Hechtman JF, Christiansen J, Novara L, Tebbutt N, Fucà G, Antoniotti C, Kim ST, Murphy D, Berenato R, Morano F, Sun J, Min B, Stephens PJ, Chen M, Cremolini C. ALK, ROS1, and NTRK Rearrangements in Metastatic Colorectal Cancer. *J Natl Cancer Inst*. 2017 Dec 1;109(12). doi: 10.1093/jnci/djx089. *co-senior author and corresponding author
 10. Barault L, Amatu A, Siravegna G, Ponzetti A, Moran S, Cassingena A, Mussolin B, Falcomatà C, Binder AM, Cristiano C, Oddo D, Guarrera S, Cancelliere C, Bustreo S, Bencardino K, Maden S, Vanzati A, Zavattari P, Matullo G, Truini M, Grady WM, Racca P, Michels KB, Siena S, Esteller M, Bardelli A, Sartore-Bianchi A, **Di Nicolantonio F**. Discovery of methylated circulating DNA biomarkers for comprehensive non-invasive monitoring of treatment response in metastatic colorectal cancer. *Gut*. 2018 Nov;67(11):1995-2005. pii: gutjnl-2016-313372. doi: 10.1136/gutjnl-2016-313372.
 11. Germano G, Lamba S, Rospo G, Barault L, Magrì A, Maione F, Russo M, Crisafulli G, Bartolini A, Lerda G, Siravegna G, Mussolin B, Frapolli R, Montone M, Morano F, de Braud F, Amirouchene-Angelozzi N, Marsoni S, D'Incalci M, Orlandi A, Giraudo E, Sartore-Bianchi A, Siena S, Pietrantonio F, **Di Nicolantonio F**, Bardelli A. Inactivation of DNA repair triggers neoantigen generation and impairs tumour growth. *Nature*. 2017 Dec 7;552(7683):116-120. doi: 10.1038/nature24673.
 12. Oddo D, Siravegna G, Gloghini A, Vernieri C, Mussolin B, Morano F, Crisafulli G, Berenato R, Corti G, Volpi CC, Buscarino M, Niger M, Dunne PD, Rospo G, Valtorta E, Bartolini A, Fucà G, Lamba S, Martinetti A, Di Bartolomeo M, de Braud F, Bardelli A, Pietrantonio F, **Di Nicolantonio F**. Emergence of MET hyper-amplification at progression to MET and BRAF inhibition in colorectal cancer. *Br J Cancer*. 2017 Jul 25;117(3):347-352. doi: 10.1038/bjc.2017.196. PMID: 28654634
 13. Sartore-Bianchi A, Pietrantonio F, Amatu A, Milione M, Cassingena A, Ghezzi S, Caporale M, Berenato R, Falcomatà C, Pellegrinelli A, Bardelli A, Nichelatti M, Tosi F, De Braud F, **Di Nicolantonio F**, Barault L, Siena S. Digital PCR assessment of MGMT promoter methylation coupled with reduced protein expression optimises prediction of response to alkylating agents in metastatic colorectal cancer patients. *Eur J Cancer*. 2017 Jan;71:43-50. doi: 10.1016/j.ejca.2016.10.032. Epub 2016 Dec 18. PMID: 27997874
 14. Comunanza V, Corà D, Orso F, Consonni FM, Middonti E, **Di Nicolantonio F**, Buzdin A, Sica A, Medico E, Sangiolo D, Taverna D, Bussolino F. VEGF blockade enhances the antitumor effect of BRAFV600E inhibition. *EMBO Mol Med*. 2017 Feb;9(2):219-237. doi: 10.15252/emmm.201505774. PMID: 27974353
 15. Pietrantonio F, Oddo D, Gloghini A, Valtorta E, Berenato R, Barault L, Caporale M, Busico A, Morano F, Gualeni AV, Alessi A, Siravegna G, Perrone F, Di Bartolomeo M, Bardelli A, de Braud F, **Di Nicolantonio F**. MET-Driven Resistance to Dual EGFR and BRAF Blockade May Be Overcome by Switching from EGFR to MET Inhibition in BRAF-Mutated Colorectal Cancer. *Cancer Discov*. 2016 Sep;6(9):963-71. doi: 10.1158/2159-8290.CD-16-0297. Epub 2016 Jun 20. PMID: 27325282.
 16. Oddo D, Sennott EM, Barault L, Valtorta E, Arena S, Cassingena A, Filiciotto G, Marzolla G, Elez E, van Geel RM, Bartolini A, Crisafulli G, Boscaro V, Godfrey JT, Buscarino M,

- Cancelliere C, Linnebacher M, Corti G, Truini M, Siravegna G, Grasselli J, Gallicchio M, Bernards R, Schellens JH, Tabernero J, Engelman JA, Sartore-Bianchi A, Bardelli A, Siena S, Corcoran RB, **Di Nicolantonio F**. Molecular Landscape of Acquired Resistance to Targeted Therapy Combinations in BRAF-Mutant Colorectal Cancer. *Cancer Res*. 2016 Aug 1;76(15):4504-15. doi: 10.1158/0008-5472.CAN-16-0396. Epub 2016 Jun 16. PMID: 27312529.
17. Bartolini A, Cardaci S, Lamba S, Oddo D, Marchiò C, Cassoni P, Amoreo CA, Corti G, Testori A, Bussolino F, Pasqualini R, Arap W, Corà D, **Di Nicolantonio F***, Marchio S. BCAM and LAMA5 Mediate the Recognition between Tumor Cells and the Endothelium in the Metastatic Spreading of KRAS Mutant Colorectal Cancer. *Clin Cancer Res*. 2016 Oct 1;22(19):4923-4933. Epub 2016 May 3. doi: 10.1158/1078-0432.CCR-15-2664 PMID: 27143691 ***co-last and corresponding author**
 18. Vecchione L, Gambino V, Raaijmakers J, Schlicker A, Fumagalli A, Russo M, Villanueva A, Beerling E, Bartolini A, Mollevi DG, El-Murr N, Chiron M, Calvet L, Nicolazzi C, Combeau C, Henry C, Simon IM, Tian S, In 't Veld S, D'ario G, Mainardi S, Beijersbergen RL, Liefink C, Linn S, Rumpf-Kienzl C, Delorenzi M, Wessels L, Salazar R, **Di Nicolantonio F**, Bardelli A, van Rheenen J, Medema RH, Tejpar S, Bernards R. A Vulnerability of a Subset of Colon Cancers with Potential Clinical Utility. *Cell*. 2016 Apr 7;165(2):317-30. doi: 10.1016/j.cell.2016.02.059. PMID: 27058664
 19. Righi L, Vatrano S, **Di Nicolantonio F**, Massa F, Rossi G, Cavazza A, Volante M, Votta A, Izzo S, Lo Iacono M, Ardisson F, Di Maio M, Novello S, Scagliotti GV, Papotti M. Retrospective Multicenter Study Investigating the Role of Targeted Next-Generation Sequencing of Selected Cancer Genes in Mucinous Adenocarcinoma of the Lung. *J Thorac Oncol*. 2016 Apr;11(4):504-15. doi: 10.1016/j.jtho.2016.01.004. Epub 2016 Jan 13. PMID: 26774193
 20. Barault L, Amatu A, Bleeker FE, Moutinho C, Falcomatà C, Fiano V, Cassingena A, Siravegna G, Milione M, Cassoni P, De Braud F, Rudà R, Soffietti R, Venesio T, Bardelli A, Wesseling P, de Witt Hamer P, Pietrantonio F, Siena S, Esteller M, Sartore-Bianchi A, **Di Nicolantonio F**. Digital PCR quantification of MGMT methylation refines prediction of clinical benefit from alkylating agents in glioblastoma and metastatic colorectal cancer. *Ann Oncol*. 2015 Sep;26(9):1994-9. doi: 10.1093/annonc/mdv272. PMID: 26113646
 21. Medico E, Russo M, Picco G, Cancelliere C, Valtorta E, Corti G, Buscarino M, Isella C, Lamba S, Martinoglio B, Veronese S, Siena S, Sartore-Bianchi A, Beccuti M, Mottolese M, Linnebacher M, Cordero F, **Di Nicolantonio F***, Bardelli A. The molecular landscape of colorectal cancer cell lines unveils clinically actionable kinase targets. *Nat Commun*. 2015 Apr 30;6:7002. doi: 10.1038/ncomms8002. PMID: 25926053 ***co-last and corresponding author** ISI Highly Cited Paper
 22. Lamba S, Russo M, Sun C, Lazzari L, Cancelliere C, Grenrum W, Liefink C, Bernards R, **Di Nicolantonio F***, Bardelli A. RAF suppression synergizes with MEK inhibition in KRAS mutant cancer cells. *Cell Rep*. 2014 Sep 11;8(5):1475-83. PMID: 25199829. ***co-last and corresponding author**
 23. Sun C, Wang L, Huang S, Heynen GJ, Prahallad A, Robert C, Haanen J, Blank C, Wesseling J, Willems SM, Zecchin D, Hobor S, Bajpe PK, Liefink C, Mateus C, Vagner S, Grenrum W, Hofland I, Schlicker A, Wessels LF, Beijersbergen RL, Bardelli A, **Di Nicolantonio F**, Eggermont AM, Bernards R. Reversible and adaptive resistance to BRAF(V600E) inhibition in melanoma. *Nature*. 2014 Apr 3;508(7494):118-22. doi: 10.1038/nature13121. Epub 2014 Mar 26. PMID: 24670642 ISI Highly Cited Paper
 24. Zecchin D, Boscaro V, Medico E, Barault L, Martini M, Arena S, Cancelliere C, Bartolini A, Crowley EH, Bardelli A, Gallicchio M, **Di Nicolantonio F**. BRAF V600E Is a Determinant of Sensitivity to Proteasome Inhibitors. *Mol Cancer Ther*. 2013 Dec;12(12):2950-61. doi: 10.1158/1535-7163.MCT-13-0243. Epub 2013 Oct 9. PMID: 24107445
 25. Crowley E, **Di Nicolantonio F**, Loupakakis F, Bardelli A. Liquid biopsy: monitoring cancer-genetics in the blood. *Nat Rev Clin Oncol*. 2013 Aug;10(8):472-84. doi:10.1038/nrclinonc.2013.110. PMID: 23836314. ISI Highly Cited Paper
 26. Michieli P, **Di Nicolantonio F**. Targeted therapies: Tivantinib-a cytotoxic drug in MET

inhibitor's clothes? *Nat Rev Clin Oncol*. 2013 Jul;10(7):372-4. PMID: 23712183.

27. **Di Nicolantonio F**, Bardelli A. Mouse Models of Kras-Mutant Colorectal Cancer: Valuable GEMMs for Drug Testing? *Clin Cancer Res*. 2013 Jun 1;19(11):2794-6. PMID: 23613316
28. Barault L, Lamba S, **Di Nicolantonio F**. Ras Mutations in Cancer. In: *eLS 2013*. Edited by John Wiley & Sons Ltd:Chichester <http://www.els.net/> doi: 10.1002/9780470015902.a0025010, October 2013.
29. Valtorta E, Misale S, Sartore-Bianchi A, Nagtegaal ID, Paraf F, Lauricella C, Dimartino V, Hobor S, Jacobs B, Ercolani C, Lamba S, Scala E, Veronese S, Laurent-Puig P, Siena S, Tejpar S, Mottolese M, Punt CJ, Gambacorta M, Bardelli A, **Di Nicolantonio F**. KRAS gene amplification in colorectal cancer and impact on response to EGFR-targeted therapy. *Int J Cancer*. 2013 Sep 1;133(5):1259-65. doi: 10.1002/ijc.28106. PMID: 23404247
30. Misale S, Yaeger R, Hobor S, Scala E, Janakiraman M, Liska D, Valtorta E, Schiavo R, Buscarino M, Siravegna G, Bencardino K, Cercek A, Chen C.-T, Veronese S, Zanon C, Sartore-Bianchi A, Gambacorta M, Gallicchio M, Vakiani E, Boscaro V, Medico E, Weiser M, Siena S, **Di Nicolantonio F**, Solit D, Bardelli A. Emergence of KRAS mutations and acquired resistance to anti EGFR therapy in colorectal cancer. *Nature*. 2012 Jun 28;486(7404):532-6. PMID: 22722830 ISI Highly Cited Paper
31. Prahallad A*, Sun C*, Huang S*, **Di Nicolantonio F***, Salazar R, Zecchin D, Beijersbergen RL, Bardelli A, Bernards R. Unresponsiveness of colon cancer to BRAF(V600E) inhibition through feedback activation of EGFR. *Nature*. 2012 Jan 26; 483(7387):100-3. PMID: 22281684 ***co-first authorship, equal contributors** ISI Highly Cited Paper
32. Bottos A, Martini M, **Di Nicolantonio F**, Comunanza V, Maione F, Minassi A, Appendino G, Bussolino F, Bardelli A. Targeting oncogenic serine/threonine-protein kinase BRAF in cancer cells inhibits angiogenesis and abrogates hypoxia. *Proc Natl Acad Sci U S A*. 2012 Feb 7;109(6):E353-9. PMID: 22203991
33. Bertotti A, Migliardi G, Galimi F, Sassi F, Torti D, Isella C, Corà D, **Di Nicolantonio F**, Buscarino M, Petti C, Ribero D, Russolillo N, Muratore A, Massucco P, Pisacane A, Molinaro L, Valtorta E, Sartore-Bianchi A, Risio M, Capussotti L, Gambacorta M, Siena S, Medico E, Sapino A, Marsoni S, Comoglio PM, Bardelli A, Trusolino L. A molecularly annotated platform of patient-derived xenografts ('xenopatients') identifies HER2 as an effective therapeutic target in cetuximab-resistant colorectal cancer. *Cancer Discovery* November 2011 1:508-523; doi:10.1158/2159-8290.CD-11-0109. PMID: 22586653 ISI Highly Cited Paper
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