

Curriculum Vitae
LIVIO TRUSOLINO

Personal details

Born in Torino, IT, April 30th, 1968

Nationality: Italian

Email: livio.trusolino@ircc.it

Websites: https://www.oncology.unito.it/do/docenti.pl/Show?_id=ltrusoli#tab-profilo
<https://irccs.org/translational-cancer-medicine>

ORCID ID: 0000-0002-6379-3365; Scopus ID: 6701648802; Web of Science ResearcherID: DXZ-9133-2022

Education

1994 – 1997: Ph.D. (Doctor of Philosophy)
San Raffaele Scientific Institute, Milano, Italy

1987 – 1993 M.D. (Medical Doctor)
University of Torino, Torino, Italy

Professional experience and current position

2017: Full Professor, University of Torino School of Medicine, Torino, Italy

2008: Head, Laboratory of Translational Cancer Medicine, Candiolo Cancer Institute, Candiolo, Torino, Italy

2006: Associate Professor, University of Torino School of Medicine, Torino, Italy

2001: Group Leader, Division of Molecular Oncology, Candiolo Cancer Institute, Candiolo, Torino, Italy

2000: Assistant Professor, University of Torino School of Medicine, Torino, Italy

Participation to Directive Boards of Scientific Societies and/or Institutions:

2023: Cancer Discovery Editorial Board – Member

2023: EACR Panel of Reviewers – Member

2021: Translational Oncology Programme Committee, ESMO 2021 Annual Meeting – Member

2019: Science Translational Medicine Advisory Board – Member

2018: GI Colorectal Programme Committee, ESMO 2019 and ESMO 2020 Annual Meetings – Member

2014: AIRC ‘Comitato Tecnico Scientifico – Member

Honors

2003: Lorenza Cescatti Prize for Experimental Oncology, Trento Foundation for Cancer Research

1997: Special award for excellence in undergraduate track record, University of Torino School of Medicine

Teaching activities:

2000 – present: MD Program, School of Medicine. Credits: 7. Teaching hours: 60. Class size: 150.

2001 – 2012: BSc Program in Physiotherapy. Credits: 1. Teaching hours: 12. Class size: 50.

BSc Program in Speech and Language Pathology. Credits: 1. Teaching hours: 12. Class size: 30.

BSc Program in Orthoptics. Credits: 1. Teaching hours: 12. Class size: 10.

BSc Program in Child Psychomotricity. Credits: 1. Teaching hours: 12. Class size: 10.

2001 – 2009: BSc Program in Psychiatric Rehabilitation. Credits: 1. Teaching hours: 18. Class size: 20.

Post-graduate Specialization in Pediatrics. Credits: 1: Teaching hours: 10. Class size: 15.

Post-graduate Specialization in Orthopedics. Credits: 0.5: Teaching hours: 6. Class size: 10.

2001 – 2007: BSc Nursing Program. Credits: 1.5. Teaching hours: 18. Class size: 250.

2001 – 2004: BSc Program in Foods and Nutrition. Credits: 1. Teaching hours: 18. Class size: 20.

BSc Program in Neurophysiopathology. Credits: 1. Teaching hours: 18. Class size: 20.

2001 – 2003: BSc Medical Radiation Technologist Program. Credits: 1. Teaching hours: 12. Class size: 20.

- 2008 – 2016 BSc Medical Laboratory Program. Credits: 0.5. Teaching hours: 8. Class size: 20.
Member of the PhD Program in Molecular Medicine, University of Torino School of Medicine.
- 2017 – 2022 Member of the PhD Program in Medical Physiopathology, University of Torino School of Medicine.
- 2022 – present: Member of the PhD Program in Translational Oncology, University of Torino School of Medicine.
- 2013 – present Member of the MD/PhD Program in Medicine, University of Torino School of Medicine.

Research main topics

In some tumours one single hyperactive oncogene is both necessary and sufficient to maintain the transformed phenotype, despite the progressive accumulation of many other genetic and epigenetic insults ('oncogene addiction'). In therapeutic terms, pharmacological inactivation of the addictive oncoprotein leads to cell-cycle arrest and/or apoptosis, with consequent regression of the tumour mass. My lab has contributed to elucidating the genomic circuits that govern drug sensitivity in oncogene-addicted tumours as a prelude to understanding the molecular underpinnings of responsiveness to targeted therapies. Recently, we have extended our interest to non-genetic (adaptive) mechanisms of therapeutic resistance, including resistance to chemotherapeutics.

Our objective is to unravel the signalling pathways, transcriptional programs and genomic makeups that selectively mediate drug sensitivity and therapeutic responsiveness in cancer, with a special emphasis on metastatic colorectal tumours. To this aim, we use different technological platforms (proteomics and phosphoproteomics, deep DNA and RNA sequencing, gene copy number analysis) and clinically relevant experimental settings (cell lines, patient-derived tumourgrafts, colospheres, organoids). Our operational pipeline involves the use of integrated, large-scale molecular data for discovery and hypothesis generation, followed by cell-based mechanistic insight and preclinical validation in animal models. This knowledge forms a predictive foundation for the rational identification of novel tumour targets and provides hints for molecularly-driven patient stratification.

Current research topics include:

- The mechanistic bases of sensitivity and resistance to anti-cancer targeted drugs
- The identification of clinically exploitable biomarkers and therapeutic targets for patient stratification
- The mechanisms of adaptive drug tolerance
- Residual disease
- Molecular determinants of response to cytotoxics

Main projects as PI:

Ongoing

- 2018 – 2025: AIRC (Italian Association for Cancer Research) Multi-Unit Project '5 per mille' 21091: "Insights into the evolving heterogeneity of metastatic colorectal cancer: from mechanisms to therapies". Group Leader.
- 2020 – 2024: AIRC Investigator Grant 22802: "Discovery and validation of synthetic lethal interactions with oncogenic KRAS dependency in colorectal cancer organoids". Principal Investigator.
- 2019 – 2023: AIRC Accelerator Award 22795: "ACRCelerate: Colorectal Cancer Stratified Medicine Network". Group Leader.
- 2019 – 2023: FPRC (Piedmontese Foundation for Cancer Research) Intramural Grant: "Pharmacogenomics of head-and-neck cancer". Principal Investigator.
- 2019 – 2023: KWF Kanker Bestrijding Consortium Project 12516: "Phosphoproteomics and integrative analysis to enable precision medicine for anti-EGFR therapy in colorectal cancer". Group Leader.
- 2018 – 2023: EU Horizon 2020 754923 COLOSSUS: "Advancing a precision medicine paradigm in metastatic colorectal cancer: Systems based patient stratification solutions".

Group Leader.

Expired

- 2018 – 2020: FPRC Intramural Grant: “Immunogenomics of colorectal cancer”. Group Leader.
2017 – 2019: AIRC Investigator Grant 18532: “Targeting PI3K and beta-catenin signalling to deteriorate minimal residual disease after EGFR blockade in colon cancer”.
Principal Investigator.
2017 – 2019: FPRC Intramural Grant: “Cancer of unknown primary and hypermetastatic disease: from mechanisms to therapeutic applications”. Group Leader.
2016 – 2018: EU TRANSCAN TACTIC: “Targeting colon tumour-initiating cell heterogeneity”.
Group Leader.
2010 – 2017: AIRC Molecular Clinical Oncology Multi-Unit Project ‘5 per mille’ 9970:
“Analysis of positive predictors for EGFR-targeted therapies in mCRCs: an ex vivo prospective trial in xenopatiens”. Group Leader.
2014 – 2018: FPRC Intramural Grant: “Understanding the molecular bases of secondary resistance to EGFR targeted therapies in colorectal cancer”. Group Leader.
2014 – 2016: AIRC Investigator Grant 14205: “Beyond response: Exploring dynamic adaptation of colorectal tumours to anti-EGFR therapies”. Principal Investigator.
2011 – 2013: AIRC (Italian Association for Cancer Research) Investigator Grant 10116:
“Mammary stem cells and the MET oncogene: insights into the pathogenesis of basal-like breast cancer”. Principal Investigator.
2008 – 2010: AIRC MFAG (My First AIRC Grant) 4770: “Differential phosphoproteomic profiling of tyrosine kinase activation/inhibition in oncogene-addicted cells”.
Principal Investigator.
2005 – 2006: Progetti di Ricerca di Rilevante Interesse Nazionale (PRIN, national research grant from the Italian Ministry of Education): “Therapeutic potential of MET receptor ectodomains”. Group Leader.

Bibliometry (2012-present) (www.scopus.com)

Number of total publications in peer-reviewed journals in the last ten years (2012-2023): 79
Impact Factor (2021 journal IF WOS) of the total papers of last ten years: 1778.8
Average IF/paper of the last ten years: 22.5
Total number of citations: 13,592 (Scopus)
H index: 57 (Scopus)

Publications

- * **Corresponding author**
§ **Senior co-authorship**

Original research articles (2022 – 2017, selected)

1. Ermes Candiello, Gigliola Reato, Federica Verginelli, Gennaro Gambardella, Antonio D’Ambrosio, Noemi Calandra, Francesca Orzan, Antonella Iuliano, Raffaella Albano, Francesco Sassi, Paolo Luraghi, Paolo M Comoglio, Andrea Bertotti, Livio Trusolino, Carla Boccaccio.
MICRORNA 483-3P OVEREXPRESSION UNLEASHES INVASIVE GROWTH OF METASTATIC COLORECTAL CANCER VIA NDRG1 DOWNREGULATION AND ENSUING ACTIVATION OF THE ERBB3/AKT AXIS.
Mol. Oncol. 2023 Mar 2. doi: 10.1002/1878-0261.13408. Online ahead of print
2. Marta Falcinelli, Giulia Dell’Omo, Elena Grassi, Elisa Mariella, Simonetta Maria Leto, Sharon Scardellato, Annalisa Lorenzato, Sabrina Arena, Andrea Bertotti, Livio Trusolino, Alberto Bardelli, Fabrizio d’Adda di Fagagna.
COLORECTAL CANCER PATIENT-DERIVED ORGANOID AND CELL LINES HARBORING ATRX AND/OR DAXX MUTATIONS LACK ALTERNATIVE LENGTHENING OF TELOMERES (ALT).
Cell Death Dis. 14, 96, 2023

3*. Simonetta M Leto, Martina Ferri, Francesco Sassi, Eugenia R Zanella, Francesca Cottino, Valentina Vurchio, Irene Catalano, Alessandro Ferrero, Caterina C Zingaretti, Caterina Marchiò, Elena Grassi, Livio Trusolino, Andrea Bertotti.

SYNTHETIC LETHAL INTERACTION WITH BCL-XL BLOCKADE DEEPENS RESPONSE TO CETUXIMAB IN PATIENT-DERIVED MODELS OF METASTATIC COLORECTAL CANCER.

Clin. Cancer Res. 29, 1102-1113, 2023

4. Ester Gil Vasquez, Nadia Nasreddin, Gabriel N Valbuena, Eoghan J Mulholland, Hayley L Belnoue-Davis, Holly R Eggington, Ryan O Schenck, Valérie M Wouters, Pratyaksha Wirapati, Kathryn Gilroy, Tamsin R M Lannagan, Dustin J Flanagan, Arafath K Najumudeen, Sulochana Omwenga, Amy M B McCorry, Alistair Easton, Viktor H Koelzer, James E East, Dion Morton, Livio Trusolino, Timothy Maughan, Andrew D Campbell, Maurice B Loughrey, Philip D Dunne, Petros Tsantoulis, David J Huels, Sabine Tejpar, Owen J Sansom, Simon J Leedham.

DYNAMIC AND ADAPTIVE CANCER STEM CELL POPULATION ADMIXTURE IN COLORECTAL NEOPLASIA.

Cell Stem Cell 29, 1213-1228, 2022

5. Roberto Dinami, Eleonora Petti, Manuela Porru, Angela Rizzo, Federica Ganci, Andrea Sacconi, Paola Ostano, Giovanna Chiorino, Livio Trusolino, Giovanni Blandino, Gennaro Ciliberto, Pasquale Zizza, Annamaria Biroccio.

TRF2 COOPERATES WITH CTCF FOR CONTROLLING THE ONCOMIR-193B-3P IN COLORECTAL CANCER.

Cancer Lett. 533, 215607, 2022

6. Patricia Jaaks, Elizabeth A Coker, Daniel J Vis, Olivia Edwards, Emma F Carpenter, Simonetta M Leto, Lisa Dwane, Francesco Sassi, Howard Lightfoot, Syd Barthorpe, Dieudonne van der Meer, Wanjuan Yang, Alexandra Beck, Tatiana Mironenko, Caitlin Hall, James Hall, Iman Mali, Laura Richardson, Charlotte Tolley, James Morris, Frances Thomas, Ermira Lleshi, Nanne Aben, Cyril H Benes, Andrea Bertotti, Livio Trusolino, Lodewyk Wessels, Mathew J Garnett.

EFFECTIVE DRUG COMBINATIONS IN BREAST, COLON AND PANCREATIC CANCER CELLS.

Nature 603, 166-173, 2022

7. Martina Tedesco, Francesca Giannese, Dejan Lazarević, Valentina Giansanti, Dalia Rosano, Silvia Monzani, Irene Catalano, Elena Grassi, Eugenia R Zanella, Oronza A Botrugno, Leonardo Morelli, Paola Panina Bordignon, Giulio Caravagna, Andrea Bertotti, Gianvito Martino, Luca Aldrighetti, Sebastiano Pasqualato, Livio Trusolino, Davide Cittaro, Giovanni Tonon.

CHROMATIN VELOCITY REVEALS EPIGENETIC DYNAMICS BY SINGLE-CELL PROFILING OF HETEROCHROMATIN AND EUCHROMATIN.

Nature Biotechnol. 40, 235-244, 2022

8. Adam Lafferty, Alice C O'Farrell, Giorgia Migliardi, Niraj Khemka, Andreas U Lindner, Francesco Sassi, Eugenia R Zanella, Manuela Salvucci, Evy Vanderheyden, Elodie Modave, Bram Boeckx, Luise Halang, Johannes Betge, Matthias P A Ebert, Patrick Dicker, Guillem Argilés, Josep Taberner, Rodrigo Dienstmann, Enzo Medico, Diether Lambrechts, Andrea Bertotti, Claudio Isella, Livio Trusolino, Jochen H M Prehn, Annette T Byrne.

MOLECULAR SUBTYPING COMBINED WITH BIOLOGICAL PATHWAY ANALYSES TO STUDY REGORAFENIB RESPONSE IN CLINICALLY RELEVANT MOUSE MODELS OF COLORECTAL CANCER.

Clin. Cancer Res. 27, 5979-5992, 2021

9. Federica Invrea, Simona Punzi, Consalvo Petti, Rosalba Minelli, Michael D Peoples, Christopher A Bristow, Valentina Vurchio, Alessia Corrado, Alberto Bragoni, Caterina Marchiò, Andrea Bertotti, Livio Trusolino, Alberto Bardelli, Claudio Isella, Alessandro Carugo, Giulio F Draetta, Enzo Medico.

SYNTHETIC LETHALITY SCREENING HIGHLIGHTS COLORECTAL CANCER VULNERABILITY TO CONCOMITANT BLOCKADE OF NEDD8 AND EGFR PATHWAYS.

Cancers (Basel) 13, 3805, 2021

10. Veronica Fiorito, Anna Lucia Allocco, Sara Petrillo, Elena Gazzano, Simone Torretta, Saverio Marchi, Francesca Destefanis, Consiglia Pacelli, Valentina Audrito, Paolo Provero, Enzo Medico, Deborah

Chiabrando, Paolo Ettore Porporato, Carlotta Cancelliere, Alberto Bardelli, Livio Trusolino, Nazzareno Capitanio, Silvia Deaglio, Fiorella Altruda, Paolo Pinton, Simone Cardaci, Chiara Riganti, Emanuela Tolosano.

THE HEME SYNTHESIS-EXPORT SYSTEM REGULATES THE TRICARBOXYLIC ACID CYCLE FLUX AND OXIDATIVE PHOSPHORYLATION.

Cell Rep. 35, 109252, 2021

11. Bas Ponsioen, Jasmin B Post, Julian R Buissant des Amorie, Dimitrios Laskaris, Ravian L van Ineveld, Simone Kersten, Andrea Bertotti, Francesco Sassi, François Sipieter, Benjamin Cappe, Sander Mertens, Ingrid Verlaan-Klink, Sylvia F Boj, Rob G J Vries, Holger Rehmann, Peter Vandenabeele, Franck B Riquet, Livio Trusolino, Johannes L Bos, Hugo J G Snippert.

QUANTIFYING SINGLE-CELL ERK DYNAMICS IN COLORECTAL CANCER ORGANOID REVEALS EGFR AS AN AMPLIFIER OF ONCOGENIC MAPK PATHWAY SIGNALLING.

Nature Cell Biol. 23, 377-390, 2021

12§. Xing Yi Woo, Jessica Giordano, Anuj Srivastava, Zi-Ming Zhao, Michael W Lloyd, Roebi de Bruijn, Yun-Suhk Suh, Rajesh Patidar, Li Chen, Sandra Scherer, Matthew H Bailey, Chieh-Hsiang Yang, Emilio Cortes-Sanchez, Yuanxin Xi, Jing Wang, Jayamanna Wickramasinghe, Andrew V Kossenkov, Vito W Rebecca, Hua Sun, R Jay Mashl, Sherri R Davies, Ryan Jeon, Christian Frech, Jelena Randjelovic, Jacqueline Rosains, Francesco Galimi, Andrea Bertotti, Adam Lafferty, Alice C O'Farrell, Elodie Modave, Diether Lambrechts, Petra Ter Brugge, Violeta Serra, Elisabetta Marangoni, Rania El Boty, Hyunsoo Kim, Jong-Il Kim, Han-Kwang Yang, Charles Lee, Dennis A Dean 2nd, Brandi Davis-Dusenbery, Yvonne A Evrard, James H Doroshov, Alana L Wel, Bryan E Welm, Michael T Lewis, Bingliang Fang, Jack A Roth, Funda Meric-Bernstam, Meenhard Herlyn, Michael A Davies, Li Ding, Shunqiang Li, Ramaswamy Govindan, Claudio Isella, Jeffrey A Moscow, Livio Trusolino, Annette T Byrne, Jos Jonkers, Carol J Bult, Enzo Medico, Jeffrey H Chuang, PDXNET Consortium; EurOPDX Consortium.

CONSERVATION OF COPY NUMBER PROFILES DURING ENGRAFTMENT AND PASSAGING OF PATIENT-DERIVED CANCER XENOGRAPHS.

Nature Genet. 53, 86-99, 2021

13. Alice C O'Farrell, Monika A Jarzabek, Andreas U Lindner, Steven Carberry, Emer Conroy, Ian S Miller, Kate Connor, Liam Shiels, Eugenia R Zanella, Federico Lucantoni, Adam Lafferty, Kieron White, Mariangela Meyer Meyer Villamandos, Patrick Dicker, William M Gallagher, Simon A Keek, Sebastian Sanduleanu, Philippe Lambin, Henry C Woodruff, Andrea Bertotti, Livio Trusolino, Annette T Byrne, Jochen H M Prehn. IMPLEMENTING SYSTEMS MODELLING AND MOLECULAR IMAGING TO PREDICT THE EFFICACY OF BCL-2 INHIBITION IN COLORECTAL CANCER PATIENT-DERIVED XENOGRAFT MODELS.

Cancers (Basel) 12, 2978, 2020

14. Elisa Fontana, Gift Nyamundanda, David Cunningham, Dongsheng Tu, Maggie C U Cheang, Derek J Jonker, Lillian L Siu, Francesco Sclafani, Katherine Eason, Chanthirika Ragulan, Maria Antonietta Bali, Sanna Hulkki-Wilson, Jonathan M Loree, Paul M Waring, Mirella Giordano, Patrick Lawrence, Daniel Nava Rodrigues, Ruwaida Begum, Jeremy D Shapiro, Timothy J Price, Chiara Cremolini, Naureen Starling, Filippo Pietrantonio, Livio Trusolino, Christopher J O'Callaghan, Anguraj Sadanandam.

INTRATUMORAL TRANSCRIPTOME HETEROGENEITY IS ASSOCIATED WITH PATIENT PROGNOSIS AND SIDEDNESS IN PATIENTS WITH COLORECTAL CANCER TREATED WITH ANTI-EGFR THERAPY FROM THE CO.20 TRIAL.

JCO Precis. Oncol. 4, PO.20.00050, 2020

15. Andrea Sartore-Bianchi, Sara Lonardi, Cosimo Martino, Elisabetta Fenocchio, Federica Tosi, Silvia Ghezzi, Francesco Leone, Francesca Bergamo, Vittorina Zagonel, Fortunato Ciardiello, Andrea Ardizzoni, Alessio Amatu, Katia Bencardino, Emanuele Valtorta, Elena Grassi, Valter Torri, Emanuela Bonoldi, Anna Sapino, Angelo Vanzulli, Daniele Regge, Giovanni Cappello, Alberto Bardelli, Livio Trusolino, Silvia Marsoni, Salvatore Siena.

PERTUZUMAB AND TRASTUZUMAB EMTANSINE IN PATIENTS WITH HER2-AMPLIFIED METASTATIC COLORECTAL CANCER: THE PHASE II HERACLES-B TRIAL.

ESMO Open 5, e000911, 2020

16. Federica Tosi, Andrea Sartore-Bianchi, Sara Lonardi, Alessio Amatu, Francesco Leone, Silvia Ghezzi,

Cosimo Martino, Katia Bencardino, Erica Bonazzina, Francesca Bergamo, Elisabetta Fenocchio, Erika Martinelli, Teresa Troiani, Giulia Siravegna, Gianluca Mauri, Valter Torri, Giovanna Marrapese, Emanuele Valtorta, Andrea Cassingena, Giovanni Cappello, Emanuela Bonoldi, Angelo Vanzulli, Daniele Regge, Fortunato Ciardiello, Vittorina Zagonel, Alberto Bardelli, Livio Trusolino, Silvia Marsoni, Salvatore Siena. LONG-TERM CLINICAL OUTCOME OF TRASTUZUMAB AND LAPATINIB FOR HER2-POSITIVE METASTATIC COLORECTAL CANCER.

Clin. Colorectal Cancer 19, 252-262, 2020

17*. Barbara Lupo, Francesco Sassi, Marika Pinnelli, Francesco Galimi, Eugenia R Zanella, Valentina Vurchio, Giorgia Migliardi, Paolo Armando Gagliardi, Alberto Puliafito, Daria Manganaro, Paolo Luraghi, Michael Kragh, Mikkel W Pedersen, Ivan D Horak, Carla Boccaccio, Enzo Medico, Luca Primo, Daniel Nichol, Inmaculada Spiteri, Timon Heide, Alexandra Vatsiou, Trevor A Graham, Elena Élez, Guillem Argiles, Paolo Nuciforo, Andrea Sottoriva, Rodrigo Dienstmann, Diego Pasini, Elena Grassi, Claudio Isella, Andrea Bertotti, Livio Trusolino.

COLORECTAL CANCER RESIDUAL DISEASE AT MAXIMAL RESPONSE TO EGFR BLOCKADE DISPLAYS A DRUGGABLE PANETH CELL-LIKE PHENOTYPE.

Science Transl. Med. 12, eaax8313, 2020

18. Andreas U Lindner, Steven Carberry, Naser Monsefi, Ana Barat, Manuela Salvucci, Robert O'Byrne, Eugenia R Zanella, Mattia Cremona, Bryan T Hennessy, Andrea Bertotti, Livio Trusolino, Jochen H M Prehn. SYSTEMS ANALYSIS OF PROTEIN SIGNATURES PREDICTING CETUXIMAB RESPONSES IN KRAS, NRAS, BRAF AND PIK3CA WILD-TYPE PATIENT-DERIVED XENOGRAFT MODELS OF METASTATIC COLORECTAL CANCER.

Int. J. Cancer 147, 2891-2901

19. Vito Amodio, Rona Yaeger, Pamela Arcella, Carlotta Cancelliere, Simona Lamba, Annalisa Lorenzato, Sabrina Arena, Monica Montone, Benedetta Mussolin, Yu Bian, Adele Whaley, Marika Pinnelli, Yonina R Murciano-Goroff, Efsevia Vakiani, Nicola Valeri, Wei-Li Liao, Anuja Bhalkikar, Sheeno Thyparambil, Hui-Yong Zhao, Elisa de Stanchina, Silvia Marsoni, Salvatore Siena, Andrea Bertotti, Livio Trusolino, Bob T Li, Neal Rosen, Federica Di Nicolantonio, Alberto Bardelli, Sandra Misale.

EGFR BLOCKADE REVERTS RESISTANCE TO KRAS G12C INHIBITION IN COLORECTAL CANCER.

Cancer Discov. 10, 1129-1139, 2020

20. Annalisa Lorenzato, Alessandro Magrì, Vittoria Matafora, Valentina Audrito, Pamela Arcella, Luca Lazzari, Monica Montone, Simona Lamba, Silvia Deaglio, Salvatore Siena, Andrea Bertotti, Livio Trusolino, Angela Bachi, Federica Di Nicolantonio, Alberto Bardelli, Sabrina Arena.

VITAMIN C RESTRICTS THE EMERGENCE OF ACQUIRED RESISTANCE TO EGFR-TARGETED THERAPIES IN COLORECTAL CANCER.

Cancers (Basel) 12, 685, 2020

21. Mariangela Russo, Giovanni Crisafulli, Alberto Sogari, Nicole M Reilly, Sabrina Arena, Simona Lamba, Alice Bartolini, Vito Amodio, Alessandro Magrì, Luca Novara, Ivana Sarotto, Zachary D Nagel, Cortt G Piett, Alessio Amatu, Andrea Sartore-Bianchi, Salvatore Siena, Andrea Bertotti, Livio Trusolino, Mattia Corigliano, Marco Gherardi, Marco Cosentino Lagomarsino, Federica Di Nicolantonio, Alberto Bardelli.

ADAPTIVE MUTABILITY OF COLORECTAL CANCERS IN RESPONSE TO TARGETED THERAPIES.

Science 366, 1473-1480, 2019

22. Luca Lazzari, Giorgio Corti, Gabriele Picco, Claudio Isella, Monica Montone, Pamela Arcella, Erika Durinikova, Eugenia R Zanella, Luca Novara, Fabiane Barbosa, Andrea Cassingena, Carlotta Cancelliere, Enzo Medico, Andrea Sartore-Bianchi, Salvatore Siena, Mathew J Garnett, Andrea Bertotti, Livio Trusolino, Federica Di Nicolantonio, Michael Linnebacher, Alberto Bardelli, Sabrina Arena.

PATIENT-DERIVED XENOGRAFTS AND MATCHED CELL LINES IDENTIFY PHARMACOGENOMIC VULNERABILITIES IN COLORECTAL CANCER.

Clin. Cancer Res. 2019 Aug 2. pii: clincanres.3440.2018. doi: 10.1158/1078-0432.CCR-18-3440. [Epub ahead of print]

0

23. Giuseppe Rospo, Annalisa Lorenzato, Nabil Amirouchene-Angelozzi, Alessandro Magrì, Carlotta

Cancelliere, Giorgio Corti, Carola Negrino, Vito Amodio, Monica Montone, Alice Bartolini, Ludovic Barault, Luca Novara, Claudio Isella, Enzo Medico, Andrea Bertotti, Livio Trusolino, Giovanni Germano, Federica Di Nicolantonio, Alberto Bardelli.

EVOLVING NEOANTIGEN PROFILES IN COLORECTAL CANCERS WITH DNA REPAIR DEFECTS.
Genome Med. 11, 42, 2019

24. Valentina Belli, Nunzia Matrone, Stefania Napolitano, Giorgia Migliardi, Francesca Cottino, Andrea Bertotti, Livio Trusolino, Erika Martinelli, Floriana Morgillo, Davide Ciardiello, Vincenzo De Falco, Emilio Francesco Giunta, Umberto Bracale, Fortunato Ciardiello, Teresa Troiani.

COMBINED BLOCKADE OF MEK AND PI3KCA AS AN EFFECTIVE ANTITUMOR STRATEGY IN HER2 GENE AMPLIFIED HUMAN COLORECTAL CANCER MODELS.

J. Exp. Clin. Cancer Res. 38, 236, 2019

25. Robin Beekhof, Carolien van Alphen, Alex A Henneman, Jaco C. Knol, Thang V. Pham, Frank Rolfs, Mariette Labots, Evan Henneberry, Tessa Y.S. Le Large, Richard R. de Haas, Sander R. Piersma, Valentina Vurchio, Andrea Bertotti, Livio Trusolino, Henk M.W. Verheul, Connie R. Jimenez.

INKA, AN INTEGRATIVE DATA ANALYSIS PIPELINE FOR PHOSPHOPROTEOMIC INFERENCE OF ACTIVE KINASES.

Mol. Syst. Biol. 15, e8250, 2019

26. Fiona M. Behan, Francesco Iorio, Gabriele Picco, Emanuel Gonçalves, Charlotte M. Beaver, Giorgia Migliardi, Rita Santos, Yanhua Rao, Francesco Sassi, Marika Pinnelli, Rizwan Ansari, Sarah Harper, David Adam Jackson, Rebecca McRae, Rachel Pooley, Piers Wilkinson, Dieudonne van der Meer, David Dow, Carolyn Buser-Doepner, Andrea Bertotti, Livio Trusolino, Euan A. Stronach, Julio Saez-Rodriguez, Kosuke Yusa, Mathew J. Garnett.

PRIORITIZATION OF CANCER THERAPEUTIC TARGETS USING CRISPR–CAS9 SCREENS.

Nature 568, 511-5160, 2019

27. Andrea Sartore-Bianchi, Alessio Amatu, Luca Porcu, Silvia Ghezzi, Sara Lonardi, Francesco Leone, Francesca Bergamo, Elisabetta Fenocchio, Erika Martinelli, Beatrice Borelli, Federica Tosi, Patrizia Racca, Emanuele Valtorta, Emanuela Bonoldi, Cosimo Martino, Caterina Vaghi, Giovanna Marrapese, Fortunato Ciardiello, Vittorina Zagonel, Alberto Bardelli, Livio Trusolino, Valter Torri, Silvia Marsoni, Salvatore Siena.

HER2 POSITIVITY PREDICTS UNRESPONSIVENESS TO EGFR-TARGETED TREATMENT IN METASTATIC COLORECTAL CANCER.

Oncologist 2019 Apr 5. pii: theoncologist.2018-0785. doi: 10.1634/theoncologist.2018-0785. [Epub ahead of print]

28§. Giulia Siravegna, Andrea Sartore-Bianchi, Rebecca J. Nagy, Kanwal Raghav, Justin I. Odegaard, Richard B. Lanman, Livio Trusolino, Silvia Marsoni, Salvatore Siena, Alberto Bardelli.

PLASMA HER2 (ERBB2) COPY NUMBER PREDICTS RESPONSE TO HER2-TARGETED THERAPY IN METASTATIC COLORECTAL CANCER.

Clin Cancer Res. 25, 3046-3053, 2019.

29§. Giulia Siravegna, Luca Lazzari, Giovanni Crisafulli, Andrea Sartore-Bianchi, Benedetta Mussolin, Andrea Cassingena, Cosimo Martino, Richard B. Lanman, Rebecca J. Nagy, Stephen Fairclough, Giuseppe Rospo, Giorgio Corti, Alice Bartolini, Pamela Arcella, Monica Montone, Francesca Lodi, Annalisa Lorenzato, Alice Vanzati, Emanuele Valtorta, Giovanni Cappello, Andrea Bertotti, Sara Lonardi, Vittorina Zagonel, Francesco Leone, Mariangela Russo, Antonella Balsamo, Mauro Truini, Federica Di Nicolantonio, Alessio Amatu, Erica Bonazzina, Silvia Ghezzi, Daniele Regge, Angelo Vanzulli, Livio Trusolino, Salvatore Siena, Silvia Marsoni, Alberto Bardelli.

RADIOLOGIC AND GENOMIC EVOLUTION OF INDIVIDUAL METASTASES DURING HER2 BLOCKADE IN COLORECTAL CANCER.

Cancer Cell 34, 148-162, 2018

30. Filippo Pietrantonio, Federica Di Nicolantonio, Alexa B. Schrock, Jeeyun Lee, Federica Morano, Giovanni Fuca`, Petros Nikolidakos, Alexander Drilon, Jackie F. Hechtman, Jason Christiansen, Kyle Gowen, Garrett M. Frampton, Patrizia Gasparini, Daniele Rossini, Chiara Gigliotti, Seung-Tae Kim, Michele Prisciandaro, Jamie Hodgson, Alberto Zaniboni, Vi K. Chiu, Massimo Milione, Rupal Patel, Vincent Miller, Alberto Bardelli, Luca Novara, Lu Wang, Serenella M. Pupa, Gabriella Sozzi, Jeffrey Ross, Maria Di

Bartolomeo, Andrea Bertotti, Siraj Ali, Livio Trusolino, Alfredo Falcone, Filippo de Braud, Chiara Cremolini.
RET FUSIONS IN A SMALL SUBSET OF ADVANCED COLORECTAL CANCERS AT RISK OF BEING NEGLECTED.

Ann. Oncol. 29, 1394-1401, 2018

31. Paolo Luraghi, Viola Bigatto, Elia Cipriano, Gigliola Reato, Francesca Orzan, Francesco Sassi, Francesca De Bacco, Claudio Isella, Sara E. Bellomo, Enzo Medico, Paolo M. Comoglio, Andrea Bertotti, Livio Trusolino, Carla Boccaccio.

A MOLECULARLY ANNOTATED MODEL OF PATIENT-DERIVED COLON CANCER STEM-LIKE CELLS TO ASSESS GENETIC AND NONGENETIC MECHANISMS OF RESISTANCE TO ANTI-EGFR THERAPY.

Clin. Cancer Res. 24, 807-820, 2018

32*. Claudio Isella, Francesco Brundu, Sara E. Bellomo, Francesco Galimi, Eugenia Zanella, Roberta Porporato, Consalvo Petti, Alessandro Fiori, Francesca Orzan, Rebecca Senetta, Carla Boccaccio, Elisa Ficarra, Luigi Marchionni, Livio Trusolino, Enzo Medico, Andrea Bertotti.

SELECTIVE ANALYSIS OF CANCER-CELL INTRINSIC TRANSCRIPTIONAL TRAITS DEFINES NOVEL CLINICALLY RELEVANT SUBTYPES OF COLORECTAL CANCER.

Nat. Commun. 8, 15107, 2017

33. Gabriele Picco, Consalvo Petti, Francesco Sassi, Katia Grillone, Giorgia Migliardi, Teresa Rossi, Claudio Isella, Federica Di Nicolantonio, Ivana Sarotto, Anna Sapino, Alberto Bardelli, Livio Trusolino, Andrea Bertotti, Enzo Medico.

EFFICACY OF NEDD8 PATHWAY INHIBITION IN PRECLINICAL MODELS OF POORLY DIFFERENTIATED, CLINICALLY AGGRESSIVE COLORECTAL CANCER.

J. Natl. Cancer Inst. 109, 1-12, 2017

Invited reviews (2022 – 2017, selected)

1*. Eugenia R Zanella, Elena Grassi, Livio Trusolino.

TOWARDS PRECISION ONCOLOGY WITH PATIENT-DERIVED XENOGRAFTS.

Nature Rev. Clin. Oncol. 19, 719-732, 2022

2. Federica Di Nicolantonio, Pietro Paolo Vitiello, Silvia Marsoni, Salvatore Siena, Josep Tabernero, Livio Trusolino, Rene Bernards, Alberto Bardelli.

PRECISION ONCOLOGY IN METASTATIC COLORECTAL CANCER - FROM BIOLOGY TO MEDICINE.

Nature Rev. Clin. Oncol. 18, 506-525, 2021

3*. Marco Avolio, Livio Trusolino.

RATIONAL TREATMENT OF METASTATIC COLORECTAL CANCER: A REVERSE TALE OF MEN, MICE, AND CULTURE DISHES.

Cancer Discov. 11, 1644-1660, 2021

4. Renata Stripecke, Christian Münz, Jan Jacob Schuringa, Karl-Dimiter Bissig, Brian Soper, Terrence Meeham, Li-Chin Yao, James P Di Santo, Michael Brehm, Estefania Rodriguez, Anja Kathrin Wege, Dominique Bonnet, Silvia Guionaud, Kristina E Howard, Scott Kitchen, Florian Klein, Kourosh Saeb-Parsy, Johannes Sam, Amar Deep Sharma, Andreas Trumpp, Livio Trusolino, Carol Bult, Leonard Shultz.
INNOVATIONS, CHALLENGES, AND MINIMAL INFORMATION FOR STANDARDIZATION OF HUMANIZED MICE.

EMBO Mol. Med. 12, e8662

5. Rodrigo Dienstmann, Kate Connor, Annette T Byrne, COLOSSUS Consortium.

PRECISION THERAPY IN RAS MUTANT COLORECTAL CANCER.

Gastroenterology 158, 806-811, 2020

6*. Irene Catalano, Elena Grassi, Andrea Bertotti, Livio Trusolino.

IMMUNOGENOMICS OF COLORECTAL TUMORS: FACTS AND HYPOTHESES ON AN EVOLVING SAGA.

Trends Cancer 5, 779-788, 2019

7§. Paolo M. Comoglio, Livio Trusolino, Carla Boccaccio.

KNOWN AND NOVEL ROLES OF THE MET ONCOGENE IN CANCER: A COHERENT APPROACH TO TARGETED THERAPY.

Nat. Rev. Cancer 18, 341-358, 2018

8. Salvatore Siena, Andrea Sartore-Bianchi, Silvia Marsoni, Herbert I. Hurwitz, Shannon J. McCall, Frederique Penault-Llorca, Stefanie Srock, Alberto Bardelli, Livio Trusolino.

TARGETING THE HUMAN EPIDERMAL GROWTH FACTOR RECEPTOR 2 (HER2) ONCOGENE IN COLORECTAL CANCER.

Ann. Oncol. 29, 1108-1119, 2018

9. Terrence F. Meehan, Nathalie Conte, Theodore Goldstein, Giorgio Inghirami, Mark A. Murakami, Sebastian Brabetz, Zhiping Gu, Jeffrey A. Wiser, Patrick Dunn, Dale A. Begley, Debra M. Krupke, Andrea Bertotti, Alejandra Bruna, Matthew H. Brush, Annette T. Byrne, Carlos Caldas, Amanda L. Christie, Dominic A. Clark, Heidi Dowst, Jonathan R. Dry, James H. Doroshow, Olivier Duchamp, Yvonne A. Evrard, Stephane Ferretti, Kristopher K. Frese, Neal C. Goodwin, Danielle Greenawalt, Melissa A. Haendel, Els Hermans, Peter J. Houghton, Jos Jonkers, Kristel Kemper, Tin O. Khor, Michael T. Lewis, K.C. Kent Lloyd, Jeremy Mason, Enzo Medico, Steven B. Neuhauser, James M. Olson, Daniel S. Peeper, Oscar M. Rueda, Je Kyung Seong, Livio Trusolino, Emilie Vinolo, Robert J. Wechsler-Reya, David M. Weinstock, Alana Welm, S. John Werooha, Frédéric Amant, Stefan M. Pfister, Marcel Kool, Helen Parkinson, Atul J. Butte, Carol J. Bult. PDX-MI: MINIMAL INFORMATION FOR PATIENT-DERIVED TUMOR XENOGRAFT MODELS. Cancer Res. 77, e62-e66, 2017

10*. Annette T. Byrne, Denis G. Alférez, Frédéric Amant, Daniela Annibali, Joaquín Arribas, Andrew V. Biankin, Alejandra Bruna, Eva Budinská, Carlos Caldas, David K. Chang, Robert B. Clarke, Hans Clevers, George Coukos, Virginie Dangles-Marie, S. Gail Eckhardt, Eva Gonzalez-Suarez, Els Hermans, Manuel Hidalgo, Monika A. Jarzabek, Steven de Jong, Jos Jonkers, Kristel Kemper, Luisa Lanfrancione, Gunhild Mari Mælandsmo, Elisabetta Marangoni, Jean-Christophe Marine, Enzo Medico, Jens Henrik Norum, Héctor G. Palmer, Daniel S. Peeper, Pier Giuseppe Pelicci, Alejandro Piris-Gimenez, Sergio Roman-Roman, Oscar M. Rueda, Joan Seoane, Violeta Serra, Laura Soucek, Dominique Vanhecke, Alberto Villanueva, Emilie Vinolo, Andrea Bertotti, Livio Trusolino.

INTERROGATING OPEN ISSUES IN CANCER PRECISION MEDICINE WITH PATIENT-DERIVED XENOGRAFTS.

Nature Rev. Cancer 17, 254-268, 2017

Invited commentaries and editorials (2022 – 2017)

1*. Marika Pinnelli, Livio Trusolino.

THE gRASs IS GREENER: POTENTIAL NEW THERAPIES IN LUNG CANCER WITH ACQUIRED RESISTANCE TO KRAS G12C INHIBITORS.

Cancer Discov. 11, 1874-1876, 2021

2*. Irene Catalano, Livio Trusolino.

THE STROMAL AND IMMUNE LANDSCAPE OF COLORECTAL CANCER PROGRESSION DURING ANTI-EGFR THERAPY.

Cancer Cell 36, 1-3, 2019