





# **SCIENTIFIC REPORT 2022**

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## 1. Research results in the triennium 2019-2021

In the Triennium 2019 -21, the IRCCS Istituto Tumori Giovanni Paolo II carried out the following five research lines approved by the Ministry of Health:

Line 1 – "Integration, mini-invasiveness and technological innovation: single, combination, loco-regional and systemic physicochemical treatment". In the Triennium 2019-21, he produced 33 publications in SCI-reviewed international journals for a total of IF points >155. Of these, 15 with first/last name of researchers from the Institute. Within this Line of Research, several pathologies were considered and new diagnostic-therapeutic pathways identified;

**Line 2** – "Comparative oncology and spontaneous models of animal neoplasms : biomorphological , molecular and therapeutic characterisation and possible applications ". This Line of Research responds to the opportunity to develop scientific programming within the framework of a One Health approach to oncological problems. The area of interest immediately developed with the activation of an agreement for research purposes with the Veterinary Sciences of the University of Bari. He has produced 10 publications in the three-year period, with a total IF score of 27.6;

Line 3 – "Innovation and optimisation in laboratory and instrumental diagnostics and the development of nanotechnologies for therapeutic purposes and precision medicine". This is the line of research into which the majority of the Institute's scientific activities have converged in the three -year period 2019 -21. No. 253 papers were published in international impacted journals of which 102 with IF>5 and 21 with IF>10 points. No. 46 publications were carried out within the framework of international collaborations, no. 45 studies focused on preclinical models, no. 14 on early diagnostics, no. 94 on prognostic-predictive disease biomarkers, no. 10 concerned diagnostics and no. 25 publications the results of interventional clinical trials. The total impact factor over the three -year period was 1437 .623 . The most interesting results concerned the identification of predictive factors for efficacy and toxicity of checkpoint inhibitors in lung cancer and melanoma. Of particular note is the study on extracellular vesicles in melanoma patients treated with CDK, which showed how they can act as reservoirs for the drug, limiting its bioavailability (J Immun.-Cancer, 2021). This study recently demonstrated 19 that extracellular vesicles from different circulating cellular components can be used as biomarkers of therapeutic efficacy for these drugs;

Line 4 – "Cancer and quality of life : from prevention , to supportive and complementary therapies, to monitoring long survival". The scientific products of this line of research present a variety of topics but always with a view to a holistic approach to the cancer patient. A great deal of attention was paid to primary and secondary prevention aspects with a series of results concerning the role of smoking , dietary aspects, obesity , lifestyle , etc. In many cases, these aspects were also investigated in the light of specific individual genetic factors . This line produced 43 scientific papers with a total Impact Factor in the three-year period of 243.584 points;;

Line 5 – "The oncological network, the territory, civil society and the 'Giovanni Paolo II' Cancer Institute ". This line of research encompasses the Institute 's long process of scientific approach to the issues of close relationship with the territory. The researchers have paid particular attention to non-invasive laboratory practices applicable on a large scale such as Breath analysis, to clinical -prognostic considerations from real world practice, to the characterisation by genetic-preventive factors of populations of women in the Apulia region. In relation to the frequency of the disease and the peculiarities of the regional environmental framework, much attention was focused on pulmonary pathology. Finally, an entire field of research has





been dedicated to the development of algorithms based on Artificial Intelligence that can be applied to large numbers , to large cohorts of subjects . This line produced 32 scientific publications with a total Impact Factor of 120.4 points.

To these was added the **'COVID Line'**, which aims to increase scientific knowledge on both the virus and the impact related to cancer disease , in order to improve understanding of the coronavirus epidemic, contribute to more efficient clinical management of infected patients and improve the possibilities and effectiveness of therapeutic treatments. In 2020, he produced 26 scientific publications with a total Impact Factor of 43.8 points.

The table below shows the total normalised impact factor for the period 2019-2021 and the number of publications, from which an upward trend emerges, albeit with figures that have yet to consolidate.



As far as publications for 2022 are concerned, the Institute presented the following data and projections.

#### Data status at 29 September 2022:

#### 921,10 Total IF

**128** Total Number of publications









Below clinical trials details are depicted, describing profit, non-profit interventional and observational studies and their enrolled patients.



N. Pazienti totali arruolati dal 2019 al 2021 (studi attivi e chiusi)	4783
N. Pazienti arruolati in studi attivi	3059



N. Pazienti arruolati in studi attivi interventistici	262
N. Pazienti arruolati in studi attivi osservazionali	2797









## 2. Research Lines approved by the Ministry of Health in the triennium 2022-2024

In recent years, Institute's scientific activities were focused on the development of topics of great translational relevance in the field of oncology. Among them, some studies aimed to predict response to cancer therapies using complex cellular systems and artificial intelligence approaches, whereas other studies were based on the identification of new tumour neo-antigens and biomarkers for diagnosis, prognosis and prediction in biological fluids through the application of omics sciences (genomics, epigenomics, proteomics, metabolomics, radiomics), which produce an enormous amount of information, opening up new scenarios in the understanding of tumour biology.

Several three-year research projects have been approved for funding within the framework of Current Research 2022-2024, Finalised Research and ACC Network of the Ministry of Health, related to the institute's new Research Lines (Del. 219/22), which are listed below:

Line 1: From carcinogenesis to tumour progression for precision oncology;

- Line 2: Clinical trials in the era of precision oncology;
- Line 3: Computational science, artificial intelligence technologies: drivers for a digital oncology;
- Line 4: New organisational-management models in oncology.

In order to optimise the structuring of research projects, 31 research groups were set up and organized among the Institute's six departments.

Research Lines 1-2-3 include both clinical and translational research.

Description of Line 1-2-3.

## Clinical Research.

In the field of clinical research, the researchers focus has been on studies aimed to:

1. assess the metabolic status of patients treated for lymphoma, fertility aspects, psychological aspects, and the impact of motor activity in order to achieve objectives such as a) the validation of biomarkers predictive of long-term lymphoma survivorship and long-term toxicity secondary to anti-cancer treatments for lymphoma and chronic lymphatic leukaemia and b) the Survivorship Care Plan (SCP) as a tool for tertiary prevention, early detection of treatment toxicities and overall survival;

2. define the role of immunotherapy in lung malignancies, both from a clinical and translational point of view, by evaluating biological mechanisms of resistance, including the role of the tumour microenvironment and the dynamics of cells involved in the immune response to the tumour, by developing predictive models of response to treatment, and by designing clinical trials as well as participating in international clinical trials. Examples are the study of minimal residual disease in early stages after surgery and in locally advanced unresectable tumours after chemo-radiotherapy and the evaluation of radiomic features associated with response after chemo-radiotherapy and consolidation





immunotherapy in locally advanced unresectable forms or associated with lung toxicity from radiotherapy and immunotherapy in locally advanced forms or in the metastatic setting;

3. define the prognostic and predictive role of response to target therapies and immunotherapy of certain genetic, haematochemical and clinical parameters in retrospective and prospective cohorts of patients with metastatic melanoma;

4. assess cardiovascular complications related to antiblastic therapy that may compromise the continuation of oncological treatment, leading to severe disability or even death of patients, in order to define clinical, biohumoral and instrumental risk predictors of cardiotoxicity for better risk stratification. In fact, a precise definition of the risk of cardiotoxicity, also through the elaboration of specific risk scores, will allow on the one hand to personalise the choice of the type of cancer therapy and its dosage, and on the other hand to define specific cardiovascular follow-ups;

5. identify genetic factors associated with low, moderate or high cancer risks using multi-gene panels with Next Generation Sequencing (NGS) technology. This approach increases the yield of conclusive genetic diagnoses more quickly, but at the same time increases the rate of results that are difficult to interpret clinically [VUS (Variant of Uncertain Significance) or genes of uncertain penetrance] and increases the complexity of cancer genetic counselling;

6. define the best operational procedures for the isolation of ovarian stem cells from cancer patients and their potential ability to mature following thawing of the human ovarian cortical.

## Translational research.

In the area of translational research, the researchers' attention focused on:

**1.** the search for new biomarkers for diagnosis, prognosis and prediction. The studies are aimed at identifying biomarkers (extracellular vesicles-EVs, cells of immunity, cytokines, ncRNA) present in biological fluids (blood, saliva, urine, pleural fluid, ascites, peritoneal lavage fluid, etc.) that may play a role in early diagnosis or that are indicative of tumour progression (prognostic) or that can predict response or resistance to anticancer drugs. A representative example is the determination of the predictive role of response to immunotherapy, with anti-PD1, of certain subpopulations of EVs that have also been shown to be directly involved in determining resistance to this therapeutic approach, results published in high Impact Factor journals such as Molecular Cancer and Journal of Experimental & Clinical Cancer Research.

Omics approaches are widely used in conjunction with bioinformatics and multimodal analysis pipelines to identify prognostic/predictive molecular markers and signatures. An example is the selection of colon carcinomas potentially susceptible to immunotherapy by (a) evaluating a genetic and epigenetic signature and expression on both paraffin-embedded tissue and plasma and (b) a digital pathology approach for the integration of genomic data with morphometric data in order to identify specific gene alterations (e.g. KRAS).

An alternative approach for identifying new molecular biomarkers is the creation of bioinformatic algorithms and genetic and pharmacological manipulation approaches. One example is somatic cell reprogramming in combination with the genome editing technology known as CRISPR/Cas9 to study the molecular basis of how specific mutations contribute to leukaemogenesis.





**2.** the need for a more holistic understanding of cancer to optimise precision medicine. The paradigm shift that considers the tumour microenvironment as capable of producing metabolic by-products, which have a major impact on the response to therapies such as immunotherapy, and not just as a source of nourishment for the tumour and the cells in the microenvironment, has led researchers to investigate the role of the tumour microenvironment (TME) in both solid and haematological oncological diseases by identifying new tumour biomarkers. Examples are the generation of molecular signatures of prognostic value in diffuse large B-cell lymphoma generated by means of bioinformatic and mathematical approaches for in-silico dissection of the microenvironment, exploiting public big data, then validated with NanoString technology, and the study of tumour-microenvironment interaction in tumour-draining lymph nodes and its remodelling in response.

3. the testing of innovative pharmacological treatments. drug discovery for the development of innovative drug combinations aimed at optimising treatments and overcoming pharmacological resistance through the testing of new/pre-existing active ingredients with antitumour activity (drug discovery and drug repurposing) and the combination of different categories of drugs (chemotherapy, molecular targeted drugs, immunotherapy and radiotherapy). This type of studies involves the generation of cellular models representative of various tumour pathologies, be they primary cell lines, short term-cultures or patientderived organoids (PDOs), which represent a personal and dynamic model that makes it possible to conduct investigations that were previously impossible to carry out at the level of the individual patient, such as a) characterisation of specific molecular traits, b) analysis of the response to chemotherapeutic agents, targeted drugs and newly synthesised compounds, c) the identification of drugs with tumour type-specific anti-tumour action and characterisation of the mechanism of action, d) the identification of new therapeutic targets, e) the identification of biomarkers that allow disease progression and response to therapies to be followed, f) to build a database of information that will associate particular gene expression profiles with drug response. One example is the generation of PDOs from various oncogynaecological pathologies for correlation studies between tumour onset/recurrence and the presence of HPV infections, for the definition of the diagnostic/prognostic role of phospho-proteins, glyco-proteins and metabolites.

**4. drug delivery.** This type of study has a high technological impact as it involves the generation of new nanosystems for drug delivery. These drug transport nanocarriers are intended to decrease toxicity, recognise the tumour specifically and optimise the accumulation of drugs in cells. One example is recently assembled nanoparticles, by fusing liposomes with tumour cell membranes in a microfluidic system, which represent an emerging biomimetic platform with unique properties such as reduced immune clearance, long blood circulation time and improved tumour-specific targeting. These hybrid nanoparticles show enhanced selectivity for tumour cells of origin and have opened up the prospect of personalised therapy of metastatic melanoma as they are able to carry drugs such as cobimetinib and lenvatinib with significantly increased anti-tumour activity.

**5. Computational Biology.** The presence of high-throughput platforms such as Next Generation Sequencing platforms allows the generation of omics data (genomics, transcriptomics, proteomics, metabolomics) that can improve patient stratification both in terms of prognosis and response to therapy. Furthermore, the integration of molecular profiles with clinical data provides the possibility to better investigate the biology of tumours with the aim of designing personalised therapeutic approaches. The analysis of data produced





at the Institute and public databases, such as the Cancer Genome Atlas, by means of appropriate bioinformatics pipelines has made it possible to:

- design a multigenic panel capable of stratifying colon cancer patients into the four molecular subtypes;

- To design a model for predicting response to immunotherapy in metastatic melanoma patients by studying metabolite and lipoprotein profiling;

- Integrating bulk transcriptomics data with single cell data in the context of cutaneous squamous cell carcinoma for the identification of markers of response to cemiplimab.

**6.** Data analysis and Artificial Intelligence. This kind of research is based on artificial intelligence (AI) application to the analysis of biomedical data of different nature, including clinical data, as well as radiological and digital pathology imaging, with the purpose of defining models of personalised medicine. These AI-based models consist of decision support systems able to aid clinicians in improving the prediction of:

- response to neoadjuvant therapy in breast cancer patients;

- lymph node status in clinically negative breast cancer patients;
- response to oncological therapies in patients with NSCLC and pleuric mesothelioma;
- radiotoxicity in NCSLC and Head&Neck patients;
- disease recurrence in patients with early stage melanoma;
- disease recurrence in breast cancer patients;
- diagnostic and prognostic outcomes in patients with gynaecological cancer.

In the field of research that makes use of AI in Life Sciences, studies have been profitably launched for Natural Language Processing applications to pathological anatomy 'narrative referrals' for haematological pathologies to generate Diagnostic Decision Support Systems in terms of automatic even precision of pathology (ARGO Project), which are finding collaborations at national and international level. Description of Line 4.

#### Organizational Research.

As a Research and Treatment Institute with a Scientific Character, research also addresses the areas of the organisation of healthcare services in terms of qualification for safety, efficiency and effectiveness of the use of technologies in the provision of care processes also in innovative ways.

Research in this field proceeds both through the systematic application of Healthcare Technology Assessment techniques in order to obtain cost-effectiveness, cost-benefit and cost-utility ratios on care processes, and through the application of so-called 'Lean Management' principles to the organisation of healthcare services, for example in optimising the use of the operating quarter and the administration of therapies.

Another relevant area of investigation is the use of Telemedicine in the provision of Televisits, Teleconsultations, Telemonitoring. In this regard, in addition to having received funding for the clinical assistance, the setting up of 11 remote telemedicine centres in the municipalities in the area where the institute is located, collaboration has been initiated with 6 foreign research centres and 2 Italian partners for HTA assessment on large populations and evaluation of process outcomes (e.g. time taken to obtain a diagnosis, time taken to perform the first therapy) with comparative assessment in the case of using Telemedicine or a conventional approach. This collaboration led to the presentation as Co-





ordinating Centre with the other partners of a grant application in the European Tomorrow Health Care Systems (THCS) Programme.





## 3. Cooperation with external networks

The Institute is involved in several regional and national networks, listed below.

## a. PNRR:

- Analyses of HPV and host body fluid biomarkers as non-invasive strategy for detection of head and neck cancer relapse (PI for the Institute: R. Massafra).
- A multi-omic approach for gene fusion detection in hematological malignancies: towards improved diagnostic screening and therapeutic targeting- Fusion-TARGET (PI for the Institute: G. Volpe).
- Identification of common pathogenic mechanism driving squamous cell carcinomas of the anogenital tract and head &neck region to develop overarching therapeutic strategies (PI for the Institute: O. Brunetti).
- Cancer of unknown primary: shifting the paradigm from undefined heterogeneous malignancies to a new tumor type arising from cancewr stem cell by specific pathogenetic mechanism and targetable dysregulated pathways (PI for the Institute: A. Zito).
- A multiomics approach to identify signatures of response and resistance to immunotherapy in R/R Diffuse Large B-cell Lymphoma (PI for the Institute: A. Guarini).
- Leukemic cell and microenvironment interactions as the culprit of chronicity in CLL. (PI for the Institute: C. Minoia).
- Systemic reclassification of Variants of Unknown Significance in cancer-predisposing genes through machine learning applied to CRISP-based functional screens (PI for the Institute: S. Tommasi).
- Development and validation of a biomedical device for the detection, characterization and removal of Circulating Tumor Cell from the peripheral blood of patients for the treatment and diagnosis of cancer-EVOLUTION (PI for the Institute: B. Pilato).
- Dissecting the role of tau in ovarian cancer pathogenesis and drug resistance (PI for the Institute: A. Azzariti).

## b. PNC:

- DigitAl lifelong pRevEntion (DARE) (PI for the Institute: R. Massafra)
- PNC-HLS-Diagnostica Avanzata (PI for the Institute: A. Azzariti)
- Life Science TTO Network (PI for the Institute: V. Angiulli)

## c. The regional Technopole for Precision Medicine

## d. Research programmes within the Alliance Against Cancer (ACC) working groups:

- The ACC preclinical research platform for precision oncology
- National personalised oncology programme for IRCCSs in the ACC network
- GerSom Study: transcriptomic analysis of actionable genes and identification of associated germline variants in breast, ovarian and colon malignancies

## e. Finalized research projects:

 Definition and testing of a new model of clinical governance based on the integration of tools such as Health Technology Assessment, Clinical Practice Guidelines, Clinical Pathways, and healthcare performance measurement for planning, implementation and management of healthcare interventions in different settings (PI for the Institute: F. Giotta)



- Young project: PrEdicting Endopredict score with RADiomics (PEERAD): a novel radiomics model based on artificial intelligence to drive adjuvant treatment in patients with early-stage, intermediate-risk, hormone-receptor positive HER2 negative breast cancer (PI: A. Fanizzi)

## f. POS:

- POS **trajectory 3 'Regenerative, predictive and personalised medicine'**: 'Development of a platform for the clinical implementation of precision oncology in the regions of central and southern Italy.
- POS **trajectory 4 'Biotechnology**, bioinformatics and pharmaceutical development': 'Biotechnology, bioinformatics and pharmaceutical development for the creation of a Life Sciences Hub

## g. 5x1000 projects:

- Detection of known and newly identified viruses in healthy tissues and malignant solid neoplasms through the development of laboratory methods and protocols (PI: A. Zito)
- Integration of Digital Pathology in the Work Flow of Pathological Anatomy and the Biobank (PI: A. Zito)
- Cellular biomarker analysis in biological fluids of HPV-positive and HPV-negative ovarian and vulvar cancer patients (PI: G. Cormio)
- Pharmaco-economic analysis of the main therapy schemes based on antiblastic drugs, monoclonal antibodies and immunotherapeutics, broken down by anatomical district (PI: P. Nardulli)
- National observational study on cancer patients undergoing NGS (Next Generation Sequencing) profiling and evaluated by a MTB (Molecular Tumor Board) (PI: S. Tommasi)
- Screening in high-risk subjects: pancreatic cancer (PI: M. Patruno)
- Screening in Lung Cancer (PTS): a parallel pathway between clinical prevention and tobacco cessation support (PI: D. Galetta)
- Search for potential tissue and circulating predictive/prognostic markers in patients with adenocarcinoma of the pancreas and intra- and extrahepatic biliary tract in the adjuvant and metastatic settings (PI: O. Brunetti)

# 4. LIST OF PUBLICATIONS REFERRED TO 2022

Research Line	Title	lournal
	The	Journal
	Pathologic stage of ypT0N+ rectal	
TUMOR PROGRESSION FOR	treatment: clinical interpretation of	PATHOLOGY RESEARCH AND
PRECISION ONCOLOGY	an orphan status.	PRACTICE
	Segmental transverse colectomy.	
	Minimally invasive versus open	
PRECISION ONCOLOGY	collaborative study.	Updates in Surgery
	Rivaroxaban vs placebo for	
FROM CARCINOGENESIS TO	extended antithrombotic prophylaxis	
PRECISION ONCOLOGY	colorectal cancer.	BLOOD
	First-line avelumab for patients with	
FROM CARCINOGENESIS TO	PD-L1-positive metastatic or locally	
PRECISION ONCOLOGY	advanced urothelial cancer who are	ANNALS OF ONCOLOGY
	Magnetic implants in vivo guiding	
FROM CARCINOGENESIS TO	sorafenib liver delivery by	
TUMOR PROGRESSION FOR	superparamagnetic solid lipid	JOURNAL OF COLLOID AND
FROM CARCINOGENESIS TO	Interaction of Copper Trafficking	
TUMOR PROGRESSION FOR	Proteins with the Platinum	
PRECISION ONCOLOGY	Anticancer Drug Kiteplatin.	ChemMedChem
	enhances the chemosensitivity of	
FROM CARCINOGENESIS TO	NSCLC and potentiates the anti-	
TUMOR PROGRESSION FOR	tumoral effects of cisplatin: An in	BIOMEDICINE &
	Exploiting systems biology to	
	investigate the gene modules and	
	drugs in ovarian cancer: A	
	hypothesis based on the weighted	
PRECISION ONCOLOGY	analysis.	PHARMACOTHERAPY
	Microfluidic-assisted preparation of	
	targeted ph-responsive polymeric	
TUMOR PROGRESSION FOR	effectiveness in pdac: In vitro	
PRECISION ONCOLOGY	insights.	Cancers
	The cross-talk between tumor-	
FROM CARCINOGENESIS TO	endothelium: Recent advances in	
TUMOR PROGRESSION FOR	macrophage-based cancer	BIOMEDICINE &
PRECISION ONCOLOGY	immunotherapy.	PHARMACOTHERAPY
TUMOR PROGRESSION FOR	MRI in Pregnancy and Precision	
PRECISION ONCOLOGY	Medicine: A Review from Literature.	Journal of Personalized Medicine

	The Fast Track for Intestinal Tumor	
FROM CARCINOGENESIS TO	Cell Differentiation and In Vitro	
TUMOR PROGRESSION FOR	Intestinal Models by Inorganic	
	Topographic Surfaces	Pharmaceutics
	Circulating extracellular vesicles	
	expressing PD1 and PD-L1 predict	
FROM CARCINOGENESIS TO	response and mediate resistance to	
TUMOR PROGRESSION FOR	checkpoint inhibitors immunotherapy	
PRECISION ONCOLOGY	in metastatic melanoma.	Molecular Cancer
FROM CARCINICGENIESIS TO	Bile cell free DNA: a game changer	
	for monogement of bilion tract	
		F0M0 0
PRECISION UNCOLOGY	cancer?	
	Long-Term Follow-Up of Elderly	
	Patients with Acute Myeloid	
FROM CARCINOGENESIS TO	Leukemia Treated with Decitabine: A	
	Real-World Study of the Apulian	
	Hemotological Network	Canaara
		Cancers
FROM CARCINOGENESIS TO	Systemic Treatment for Metastatic	
TUMOR PROGRESSION FOR	Biliary Tract Cancer: State of the Art	
PRECISION ONCOLOGY	and a Glimpse to the Future.	Current Oncology
	·	
FROM CARCINICGENESIS TO	Impact of Antigen Presentation	
TUMOR PROGRESSION FOR	international information informatio information information information information infor	
PRECISION ONCOLOGY	in Autoimmune Hepatitis.	Frontiers in Immunology
	A Systematic Review on PD-1	
	Blockade and PD-1 Gene-Editing of	
FROM CARCINOGENESIS TO	CAR-T Cells for Glioma Therapy:	
TUMOR PROGRESSION FOR	From Deciphering to Personalized	
	Medicine	Frontiers in Immunology
	PARP Inhibitors and Radiometabolic	
	Approaches in Metastatic Castration-	
FROM CARCINOGENESIS TO	Resistant Prostate Cancer: What¿s	
TUMOR PROGRESSION FOR	Now, What, s New, and What, s	
PRECISION ONCOLOGY	Coming?	Cancers
	Eradication of Isolated Para-Aortic	
	Nodal Recurrence in a Patient with	
FROM CARCINOGENESIS TO	an Advanced High Grade Serous	
TUMOR PROGRESSION FOR	Ovarian Carcinoma: Our Experience	
PRECISION ONCOLOGY	and Review of Literature.	Medicina-Lithuania
	Inflammatory Related Reactions in	
	Humans and in Capino Broast	
DECIDION CHOCKESSION FOR	Cancers, A Spontaneous Animal	
PRECISION ONCOLOGY	Nodel of Disease.	Frontiers in Pharmacology
FROM CARCINOGENESIS TO	The Biological Relevance of	
TUMOR PROGRESSION FOR	NHERF1 Protein in Gynecological	
PRECISION ONCOLOGY	Tumors.	Frontiers in Oncoloav
	The Effect of the Turner	
TUMOR PROGRESSION FOR	ivicroenvironment on Lymphoid	
PRECISION ONCOLOGY	Neoplasms Derived from B Cells.	Diagnostics

	Impact of Proton Pump Inhibitors and Histamine-2-Receptor Antagonists on Non-Small Cell Lung	
FROM CARCINOGENESIS TO	Cancer Immunotherapy: A	
PRECISION ONCOLOGY	Analysis.	Cancers
FROM CARCINOGENESIS TO	Foreword: hepatocellular carcinoma:	
TUMOR PROGRESSION FOR PRECISION ONCOLOGY	emerging treatments, drug targets, and fundamental knowledge gaps	EXPERT OPINION ON INVESTIGATIONAL DRUGS
	Fluoropyrimidine-based doublet	
FROM CARCINOGENESIS TO	treatment for advanced biliary tract	
TUMOR PROGRESSION FOR PRECISION ONCOLOGY	cancer: a meta-analysis of ABC-06 and NIFTY.	Expert Review of Gastroenterology & Hepatology
FROM CARCINOGENESIS TO	Second-line fluoropyrimidine-based	
TUMOR PROGRESSION FOR	biliary tract cancer: a new standard	Expert Review of Gastroenterology
PRECISION ONCOLOGY	of care?	& Hepatology
	therapy, transarterial	
FROM CARCINOGENESIS TO	chemoembolization, and yttrium 90: no differences for local treatment of	
PRECISION ONCOLOGY	liver cancer?	ACTA ONCOLOGICA
FROM CARCINOGENESIS TO	Combination systemic therapies with immune checkpoint inhibitors in	
TUMOR PROGRESSION FOR	biliary tract cancer: effective but not	Expert Review of Gastroenterology
PRECISION ONCOLOGY	enougn?	& Нератоюду
	Left External Iliac Vein Injury During	
FROM CARCINOGENESIS TO	Laparoscopic Pelvic Lymphadenectomy for Early-Stage	
TUMOR PROGRESSION FOR	Ovarian Cancer: Our Experience	Frontions in Surgery
	and Review of Literature.	
FROM CARCINOGENESIS TO	FGFR Inhibitors in	
PRECISION ONCOLOGY	Experience at a Tertiary Center.	JCO Precision Oncology
	The Application of	
	Sonovaginography for Implementing	
FROM CARCINOGENESIS TO	Ultrasound Assessment of	
PRECISION ONCOLOGY	Gynaecological Diseases.	Diagnostics
FROM CARCINOGENESIS TO	Cell transcriptomic atlas of the pop-	
PRECISION ONCOLOGY	human primate Macaca fascicularis.	NATURE
	The role of immune checknoint	
	inhibitors in the treatment sequence	
FROM CARCINOGENESIS TO	of advanced gastric or gastro-	
TUMOR PROGRESSION FOR	systematic review and meta-analysis	CRITICAL REVIEWS IN
PRECISION ONCOLOGY	of randomized trials.	ONCOLOGY HEMATOLOGY
FROM CARCINOGENESIS TO	metastatic triple negative cancer:	
TUMOR PROGRESSION FOR	preliminary results, key challenges,	EXPERT OPINION ON
	ana omnoar potontial.	

FROM CARCINOGENESIS TO TUMOR PROGRESSION FOR PRECISION ONCOLOGY	Locoregional treatments plus immunotherapy in hepatocellular carcinoma: where do we stand?	Future Oncology
FROM CARCINOGENESIS TO TUMOR PROGRESSION FOR PRECISION ONCOLOGY	The Last Dance for Chemotherapy Intensification in Non-Asian Advanced Biliary Tract Cancers?	JOURNAL OF CLINICAL ONCOLOGY
FROM CARCINOGENESIS TO TUMOR PROGRESSION FOR PRECISION ONCOLOGY	Which role for predictors of response to immune checkpoint inhibitors in hepatocellular carcinoma?	Expert Review of Gastroenterology & Hepatology
FROM CARCINOGENESIS TO TUMOR PROGRESSION FOR PRECISION ONCOLOGY	The Basis and Advances in Clinical Application of Cytomegalovirus- Specific Cytotoxic T Cell Immunotherapy for Glioblastoma Multiforme.	Frontiers in Oncology
FROM CARCINOGENESIS TO TUMOR PROGRESSION FOR PRECISION ONCOLOGY	Fertility preservation techniques in cervical carcinoma.	MEDICINE
FROM CARCINOGENESIS TO TUMOR PROGRESSION FOR PRECISION ONCOLOGY	Current and Future Role of Neoadjuvant Chemoimmunotherapy for Early Triple-Negative Breast Cancer: Which Way to Go Forward.	Medicina-Lithuania
FROM CARCINOGENESIS TO TUMOR PROGRESSION FOR PRECISION ONCOLOGY	Immunotherapy in Pancreatic Cancer: Why Do We Keep Failing? A Focus on Tumor Immune Microenvironment, Predictive Biomarkers and Treatment Outcomes.	Cancers
FROM CARCINOGENESIS TO TUMOR PROGRESSION FOR PRECISION ONCOLOGY	Assessing PD-L1 status in mRCC treated with first-line immune-based combinations: A meta-analysis	Immunotherapy
FROM CARCINOGENESIS TO TUMOR PROGRESSION FOR PRECISION ONCOLOGY	KEYNOTE-522, IMpassion031 and GeparNUEVO: changing the paradigm of neoadjuvant immune checkpoint inhibitors in early triple- negative breast cancer.	Future Oncology
FROM CARCINOGENESIS TO TUMOR PROGRESSION FOR PRECISION ONCOLOGY	Genomics and Immunomics in the Treatment of Urothelial Carcinoma.	Current Oncology
FROM CARCINOGENESIS TO TUMOR PROGRESSION FOR PRECISION ONCOLOGY	Ovarian Stem Cells (OSCs) from the Cryopreserved Ovarian Cortex: A Potential for Neo-Oogenesis in Women with Cancer-Treatment Related Infertility: A Case Report and a Review of Literature.	CURRENT ISSUES IN MOLECULAR BIOLOGY
FROM CARCINOGENESIS TO TUMOR PROGRESSION FOR PRECISION ONCOLOGY	Adenosine pathway inhibitors: novel investigational agents for the treatment of metastatic breast cancer.	EXPERT OPINION ON INVESTIGATIONAL DRUGS
FROM CARCINOGENESIS TO TUMOR PROGRESSION FOR PRECISION ONCOLOGY	The Impact of Concomitant Proton Pump Inhibitors on Immunotherapy Efficacy Among Patients with Urothelial Carcinoma: A Meta- Analysis.	Journal of Personalized Medicine

FROM CARCINOGENESIS TO TUMOR PROGRESSION FOR	Prognostic value of lesion dissemination in doxorubicin, bleomycin, vinblastine, and dacarbazine-treated, interimPET- negative classical Hodgkin Lymphoma patients: A radio-	
PRECISION ONCOLOGY	genomic study.	HEMATOLOGICAL ONCOLOGY
FROM CARCINOGENESIS TO TUMOR PROGRESSION FOR PRECISION ONCOLOGY	Downstream Signaling of Inflammasome Pathway Affects Patients¿ Outcome in the Context of Distinct Molecular Breast Cancer Subtypes.	Pharmaceuticals
FROM CARCINOGENESIS TO TUMOR PROGRESSION FOR PRECISION ONCOLOGY	Targeted Therapy of B7 Family Checkpoints as an Innovative Approach to Overcome Cancer Therapy Resistance: A Review from Chemotherapy to Immunotherapy.	MOLECULES
FROM CARCINOGENESIS TO TUMOR PROGRESSION FOR PRECISION ONCOLOGY	Systemic Treatments for Metastatic Human Epidermal Growth Factor Receptor 2-Positive Breast Cancer: Old Certainties and New Frontiers	Cancer Control
FROM CARCINOGENESIS TO TUMOR PROGRESSION FOR PRECISION ONCOLOGY	Pathological Complete Response to Neoadjuvant Chemoimmunotherapy for Early Triple-Negative Breast Cancer: An Updated Meta-Analysis.	Cells
FROM CARCINOGENESIS TO TUMOR PROGRESSION FOR PRECISION ONCOLOGY	Immune Checkpoint Inhibitors and Mismatch Repair Status in Advanced Endometrial Cancer: Elective Affinities	Journal of Clinical Medicine
FROM CARCINOGENESIS TO TUMOR PROGRESSION FOR PRECISION ONCOLOGY	BRAFV600E;K601Q metastatic melanoma patient-derived organoids and docking analysis to predict the response to targeted therapy.	PHARMACOLOGICAL RESEARCH
FROM CARCINOGENESIS TO TUMOR PROGRESSION FOR PRECISION ONCOLOGY	Neoadjuvant chemoimmunotherapy in early triple-negative breast cancer: A new kid on the block?	Immunotherapy
FROM CARCINOGENESIS TO TUMOR PROGRESSION FOR PRECISION ONCOLOGY	Towards a primate single-cell atlas.	ZOOLOGICAL RESEARCH
FROM CARCINOGENESIS TO TUMOR PROGRESSION FOR PRECISION ONCOLOGY	Clinicopathological Features of FGFR3 - Mutated Upper Tract Urothelial Carcinoma: A Genomic Database Analysis.	Clinical Genitourinary Cancer
FROM CARCINOGENESIS TO TUMOR PROGRESSION FOR PRECISION ONCOLOGY	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.	Current Oncology
FROM CARCINOGENESIS TO TUMOR PROGRESSION FOR PRECISION ONCOLOGY	Cancer-Associated Thrombosis: Not All Low-Molecular-Weight Heparins Are the Same, Focus on Tinzaparin, A Narrative Review.	INTERNATIONAL JOURNAL OF CLINICAL PRACTICE

FROM CARCINOGENESIS TO TUMOR PROGRESSION FOR PRECISION ONCOLOGY	Accuracy of high-risk HPV DNA PCR, p16 <sup>(INK4a)</sup> immunohistochemistry or the combination of both to diagnose HPV-driven oropharyngeal cancer.	BMC INFECTIOUS DISEASES
FROM CARCINOGENESIS TO TUMOR PROGRESSION FOR PRECISION ONCOLOGY	NR1H3 (LXR?) is associated with pro-inflammatory macrophages, predicts survival and suggests potential therapeutic rationales in diffuse large b-cell lymphoma.	HEMATOLOGICAL ONCOLOGY
FROM CARCINOGENESIS TO TUMOR PROGRESSION FOR PRECISION ONCOLOGY	Case report: Successful multimodal assessment and management of chemothorax.	Frontiers in Surgery
FROM CARCINOGENESIS TO TUMOR PROGRESSION FOR PRECISION ONCOLOGY	LC-MS/MS Analysis on Infusion Bags and Filled Syringes of Decitabine: New Data on Physicochemical Stability of an Unstable Molecule.	ACS Omega
FROM CARCINOGENESIS TO TUMOR PROGRESSION FOR PRECISION ONCOLOGY	Targeting tumor microenvironment for cholangiocarcinoma: Opportunities for precision medicine.	Translational Oncology
FROM CARCINOGENESIS TO TUMOR PROGRESSION FOR PRECISION ONCOLOGY	CTLA-4 silencing in dendritic cells loaded with colorectal cancer cell lysate improves autologous T cell responses in vitro.	Frontiers in Immunology
FROM CARCINOGENESIS TO TUMOR PROGRESSION FOR PRECISION ONCOLOGY	Bayesian analysis supports the role of neoadjuvant chemoradiation followed by surgery for resectable locoregional esophageal cancer	Thoracic Cancer
FROM CARCINOGENESIS TO TUMOR PROGRESSION FOR PRECISION ONCOLOGY	Bayesian analysis and the role of local palliative therapeutics for malignant biliary obstruction.	Expert Review of Gastroenterology & Hepatology
FROM CARCINOGENESIS TO TUMOR PROGRESSION FOR PRECISION ONCOLOGY	Edoxaban: Front-line treatment for brachiocephalic vein thrombosis in primitive mediastinal seminoma: A case report and literature review.	MEDICINE
FROM CARCINOGENESIS TO TUMOR PROGRESSION FOR PRECISION ONCOLOGY	Association between Cervical Microbiota and HPV: Could This Be the Key to Complete Cervical Cancer Eradication?	Biology-Basel
FROM CARCINOGENESIS TO TUMOR PROGRESSION FOR PRECISION ONCOLOGY	Targeted Therapy for Hepatocellular Carcinoma: Old and New Opportunities.	Cancers
FROM CARCINOGENESIS TO TUMOR PROGRESSION FOR PRECISION ONCOLOGY	Molecular Profile and Prognostic Value of BAP1 Mutations in Intrahepatic Cholangiocarcinoma: A Genomic Database Analysis.	Journal of Personalized Medicine
FROM CARCINOGENESIS TO TUMOR PROGRESSION FOR PRECISION ONCOLOGY	Diffuse Large B Cell Lymphoma Arising in Patients with Preexisting Hodgkin Lymphoma.	Current Oncology

FROM CARCINOGENESIS TO TUMOR PROGRESSION FOR PRECISION ONCOLOGY	IDH Inhibitors and Immunotherapy for Biliary Tract Cancer: A Marriage of Convenience?	INTERNATIONAL JOURNAL OF MOLECULAR SCIENCES
FROM CARCINOGENESIS TO TUMOR PROGRESSION FOR PRECISION ONCOLOGY	Thrombin Generation and D-Dimer for Prediction of Disease Progression and Mortality in Patients with Metastatic Gastrointestinal Cancer	Cancers
FROM CARCINOGENESIS TO TUMOR PROGRESSION FOR PRECISION ONCOLOGY	Alteration of Na/H exchange regulatory factor-1 protein levels in anogenital lesions positive for mucosal high-risk human papillomavirus type 16.	VIROLOGY
TUMOR PROGRESSION FOR PRECISION ONCOLOGY	Challenges and Future Trends of Hepatocellular Carcinoma Immunotherapy	INTERNATIONAL JOURNAL OF MOLECULAR SCIENCES
FROM CARCINOGENESIS TO TUMOR PROGRESSION FOR PRECISION ONCOLOGY	Advances in novel systemic therapies for advanced hepatocellular carcinoma	Future Medicinal Chemistry
FROM CARCINOGENESIS TO TUMOR PROGRESSION FOR PRECISION ONCOLOGY	Lactobacillus crispatus M247 oral administration: Is it really an effective strategy in the management of papillomavirus- infected women?	Infectious Agents and Cancer
FROM CARCINOGENESIS TO TUMOR PROGRESSION FOR PRECISION ONCOLOGY	The Use of Phytochemicals to Improve the Efficacy of Immune Checkpoint Inhibitors: Opportunities and Challenges.	Applied Sciences-Basel
FROM CARCINOGENESIS TO TUMOR PROGRESSION FOR PRECISION ONCOLOGY	Hyperthermic intraperitoneal chemotherapy and colorectal cancer: From physiology to surgery.	World Journal of Clinical Cases
FROM CARCINOGENESIS TO TUMOR PROGRESSION FOR PRECISION ONCOLOGY	Second-Line Chemotherapy in Elderly Patients with Advanced Biliary Tract Cancer: A Multicenter Real-World Study.	Medicina-Lithuania
FROM CARCINOGENESIS TO TUMOR PROGRESSION FOR PRECISION ONCOLOGY	An Update on the Role of Anti-EGFR in the Treatment of Older Patients with Metastatic Colorectal Cancer.	Journal of Clinical Medicine
FROM CARCINOGENESIS TO TUMOR PROGRESSION FOR PRECISION ONCOLOGY	Genomic characterization of undifferentiated sarcomatoid carcinoma of the pancreas.	HUMAN PATHOLOGY
FROM CARCINOGENESIS TO TUMOR PROGRESSION FOR PRECISION ONCOLOGY	Nationwide multidisciplinary consensus on the clinical management of Merkel cell carcinoma: a Delphi panel.	Journal for ImmunoTherapy of Cancer
FROM CARCINOGENESIS TO TUMOR PROGRESSION FOR PRECISION ONCOLOGY	Controversial topics in metastatic HR+/HER2- breast cancer: Guiding treatment by a modified Delphi approach.	Frontiers in Oncology
FROM CARCINOGENESIS TO TUMOR PROGRESSION FOR PRECISION ONCOLOGY	The prognostic value of the previous nephrectomy in pretreated metastatic renal cell carcinoma receiving immunotherapy: a sub- analysis of the Meet-URO 15 study.	Journal of Translational Medicine

	The prognostic value of baseline and	
	early variations of peripheral blood	
	inflammatory ratios and their cellular	
	components in patients with	
TUMOR PROGRESSION FOR	treated with nivolumab: The 2-Meet-	
PRECISION ONCOLOGY	URO analysis.	Frontiers in Oncology
FROM CARCINOGENESIS TO	"Intestinal-Type" Vulvar	
TUMOR PROGRESSION FOR	Adenocarcinoma: A Review of the	
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	A Rare Case of Collision Tumours of	
	the Ovary: An Ovarian Serous	
	Eibrothecoma	Diagnostics
	Communications Is Time for Care:	Diagnostics
	An Italian Monocentric Survey on	
FROM CARCINOGENESIS TO	Human Papillomavirus (HPV) Risk	
TUMOR PROGRESSION FOR	Information as Part of Cervical	
PRECISION ONCOLOGY	Cancer Screening.	Journal of Personalized Medicine
	Fertility preservation strategies for	
FROM CARCINOGENESIS TO	patients with lymphoma: a real-world	
	practice survey among Fondazione	тиморі
	Lyon IARC Polyomavirus Displays	TOMORI
TUMOR PROGRESSION FOR	Transforming Activities in Primary	
PRECISION ONCOLOGY	Human Cells.	JOURNAL OF VIROLOGY
	Prevalence of 13 polyomaviruses in	
FROM CARCINOGENESIS TO	actinic keratosis and matched	
TUMOR PROGRESSION FOR	healthy skin samples of	
PRECISION ONCOLOGY	immunocompetent individuals.	Infectious Agents and Cancer
	The ERR¿-VDR axis promotes	
	calcitriol degradation and	
	cells while VDP_CVP24A1_EPP :	
FROM CARCINOGENESIS TO	overexpression correlates with poor	
TUMOR PROGRESSION FOR	prognosis in patients with basal-like	
PRECISION ONCOLOGY	breast cancer.	Molecular Oncology
	The long non-coding RNA HOTAIR	
	controls the self-renewal, cell	
FROM CARCINOGENESIS TO	senescence, and secretion of	
	antiaging protein ¿-Klotho in human	STEM CELLS
	upar controls vasculogenic minior	STEWI VELLO
TUMOR PROGRESSION FOR	ability expressed by drug-resistant	
PRECISION ONCOLOGY	melanoma cells	ONCOLOGY RESEARCH
	Pralsetinib in RET fusion-positive	
	non-small-cell lung cancer: A real-	
	world data (RWD) analysis from the	
CLINICAL TRIALS IN THE ERA OF	Italian expanded access program	
PRECISION ONCOLOGY	(EAP)	LUNG CANCER

CLINICAL TRIALS IN THE ERA OF PRECISION ONCOLOGY	Real-world experience of abiraterone acetate plus prednisone in chemotherapy-naive patients with metastatic castration-resistant prostate cancer: long-term results of the prospective ABItude study.	ESMO Open
CLINICAL TRIALS IN THE ERA OF PRECISION ONCOLOGY	The Impact of Mediterranean Dietary Intervention on Metabolic and Hormonal Parameters According to BRCA1/2 Variant Type.	Frontiers in Genetics
CLINICAL TRIALS IN THE ERA OF PRECISION ONCOLOGY	Punctual and kinetic MRD analysis from the Fondazione Italiana Linfomi MCL0208 phase 3 trial in mantle cell lymphoma	BLOOD
CLINICAL TRIALS IN THE ERA OF PRECISION ONCOLOGY	High Incidence of Invasive Fungal Diseases in Patients with FLT3- Mutated AML Treated with Midostaurin: Results of a Multicenter Observational SEIFEM Study	Journal of Fungi
CLINICAL TRIALS IN THE ERA OF PRECISION ONCOLOGY	Metabolic disorders and gastroenteropancreatic- neuroendocrine tumors (GEP- NETs): How do they influence each other? An Italian Association of Medical Oncology (AIOM)/ Italian Association of Medical Diabetologists (AMD)/ Italian Society of Endocrinology (SIE)/ Italian Society of Pharmacology (SIF) multidisciplinary consensus position paper.	CRITICAL REVIEWS IN ONCOLOGY HEMATOLOGY
CLINICAL TRIALS IN THE ERA OF PRECISION ONCOLOGY	Epidermal growth factor receptor exon 20 insertion variants in non- small cell lung cancer patients.	CRITICAL REVIEWS IN ONCOLOGY HEMATOLOGY
CLINICAL TRIALS IN THE ERA OF PRECISION ONCOLOGY	Late cardiological sequelae and long- term monitoring in classical hodgkin lymphoma and diffuse large B-cell lymphoma survivors. A systematic review by the fondazione italiana linfomi.	Cancers
CLINICAL TRIALS IN THE ERA OF PRECISION ONCOLOGY	A Clinical Prognostic Model Based on Machine Learning from the Fondazione Italiana Linfomi (FIL) MCL0208 Phase III Trial.	Cancers
CLINICAL TRIALS IN THE ERA OF PRECISION ONCOLOGY CLINICAL TRIALS IN THE ERA OF PRECISION ONCOLOGY	Second Cancers in Classical Hodgkin Lymphoma and Diffuse Large B-Cell Lymphoma. A Systematic Review by the Fondazione Italiana Linfomi. Nivolumab plus ipilimumab in melanoma brain metastases	
CLINICAL TRIALS IN THE ERA OF PRECISION ONCOLOGY	Systemic Therapy for Oligoprogression in Patients with Metastatic NSCLC Harboring Activating EGFR Mutations	Cancers

CLINICAL TRIALS IN THE ERA OF	Pathologic Complete Response in Urothelial Carcinoma Patients Receiving Neoadjuvant Immune Checkpoint Inhibitors: A Meta-	
PRECISION ONCOLOGY	Analysis.	Journal of Clinical Medicine
CLINICAL TRIALS IN THE ERA OF PRECISION ONCOLOGY	The regulatory role of autophagy- related miRNAs in lung cancer drug resistance.	BIOMEDICINE & PHARMACOTHERAPY
CLINICAL TRIALS IN THE ERA OF PRECISION ONCOLOGY	Echocardiography Monitoring during Anthracycline Administration in Hodgkin and Non-Hodgkin¿s Lymphoma: The Tei Index Evaluation.	Journal of Personalized Medicine
CLINICAL TRIALS IN THE ERA OF PRECISION ONCOLOGY	Late Endocrine and Metabolic Sequelae and Long?Term Monitoring of Classical Hodgkin Lymphoma and Diffuse Large B?Cell Lymphoma Survivors: A Systematic Review by the Fondazione Italiana Linfomi.	Cancers
CLINICAL TRIALS IN THE ERA OF PRECISION ONCOLOGY	Bone Targeting Agents in Patients with Prostate Cancer: General Toxicities and Osteonecrosis of the Jaw.	Current Oncology
CLINICAL TRIALS IN THE ERA OF PRECISION ONCOLOGY	Multiple Genetic Alterations as Resistance Mechanism during Second-Line Lorlatinib for Advanced ALK-Rearranged Lung Adenocarcinoma: A Case Report.	Diagnostics
CLINICAL TRIALS IN THE ERA OF	Daratumumab plus bortezomib or daratumumab plus lenalidomide as salvage therapy for patients with myeloma: initial follow-up of an Italian multicentre retrospective clinical experience by 'Rete Fmatologica Pugliese'.	ANNAI S OF HEMATOI OGY
CLINICAL TRIALS IN THE ERA OF PRECISION ONCOLOGY	Editorial: The Evolving Role of Immunotherapy in Non-Melanoma Skin Cancers.	Frontiers in Oncology
CLINICAL TRIALS IN THE ERA OF PRECISION ONCOLOGY	Spatial transcriptome of a germinal center plasmablastic burst hints at MYD88/CD79B mutants-enriched diffuse large B-cell lymphomas.	EUROPEAN JOURNAL OF IMMUNOLOGY
CLINICAL TRIALS IN THE ERA OF PRECISION ONCOLOGY	Incidence of grade 3¿4 adverse events, dose reduction, and treatment discontinuation in castration-resistant prostate cancer patients receiving PARP inhibitors: a meta-analysis.	Expert Opinion on Drug Metabolism & Toxicology
CLINICAL TRIALS IN THE ERA OF PRECISION ONCOLOGY	Primitive Cutaneous (P)erivascular (E)pithelioid (C)ell Tumour (PEComa): A New Case Report of a Rare Cutaneous Tumor	Genes
CLINICAL TRIALS IN THE ERA OF PRECISION ONCOLOGY	An 82-year-old woman with new onset of multiple purple-reddish nodules during treatment with abatacept for rheumatoid arthritis.	Internal and Emergency Medicine

CLINICAL TRIALS IN THE ERA OF PRECISION ONCOLOGY	The Thousand Faces of Malignant Melanoma: A Systematic Review of the Primary Malignant Melanoma of the Esophagus.	Cancers
CLINICAL TRIALS IN THE ERA OF PRECISION ONCOLOGY	Real-life efficacy and safety of idelalisib in 55 double-refractory follicular lymphoma patients.	BRITISH JOURNAL OF HAEMATOLOGY
CLINICAL TRIALS IN THE ERA OF PRECISION ONCOLOGY	Renal Toxicities in Cancer Patients Receiving Immune-Checkpoint Inhibitors: A Meta-Analysis.	Journal of Clinical Medicine
CLINICAL TRIALS IN THE ERA OF PRECISION ONCOLOGY	Prevalence and clinical impact of incidental findings on the unenhanced CT images of PET/CT scan in patients with multiple myeloma: the value of radiological reporting in the multimodal hybrid imaging	European Review for Medical and Pharmacological Sciences
CLINICAL TRIALS IN THE ERA OF PRECISION ONCOLOGY	Adjuvant PD-1 and PD-L1 Inhibitors and Relapse-Free Survival in Cancer Patients: The MOUSEION- 04 Study	Cancers
CLINICAL TRIALS IN THE ERA OF PRECISION ONCOLOGY	Antibiotic Abuse and Antimicrobial Resistance in Hospital Environment: A Retrospective Observational Comparative Study.	Medicina-Lithuania
CLINICAL TRIALS IN THE ERA OF PRECISION ONCOLOGY	Letter re: "Long-term effectiveness of empiric cardio-protection in patients receiving cardiotoxic chemotherapies: A systematic review and Bayesian network meta- analysis".	EUROPEAN JOURNAL OF CANCER
CLINICAL TRIALS IN THE ERA OF PRECISION ONCOLOGY	Levocarnitine supplementation for asparaginase-induced hepatotoxicity in adult acute lymphoblastic leukemia patients: A multicenter observational study of the campus all group.	LEUKEMIA RESEARCH
CLINICAL TRIALS IN THE ERA OF PRECISION ONCOLOGY	Communications Is Time for Care: An Italian Monocentric Survey on Human Papillomavirus (HPV) Risk Information as Part of Cervical Cancer Screening.	Journal of Personalized Medicine
CLINICAL TRIALS IN THE ERA OF PRECISION ONCOLOGY	Controversial role of mast cells in NSCLC tumor progression and angiogenesis.	Thoracic Cancer
CLINICAL TRIALS IN THE ERA OF PRECISION ONCOLOGY	Considerations regarding a network meta-analysis of targeted therapies for BRAF-mutant unresectable or metastatic melanoma,	CANCER TREATMENT REVIEWS
CLINICAL TRIALS IN THE ERA OF PRECISION ONCOLOGY	Checkpoint Inhibitors Immunotherapy in Metastatic Melanoma: When to Stop Treatment?	Biomedicines

CLINICAL TRIALS IN THE ERA OF PRECISION ONCOLOGY	miR-214-Enriched Extracellular Vesicles Released by Acid-Adapted Melanoma Cells Promote Inflammatory Macrophage- Dependent Tumor Trans-Endothelial Migration.	Cancers
CLINICAL TRIALS IN THE ERA OF PRECISION ONCOLOGY	Pemigatinib in Intrahepatic Cholangiocarcinoma: A Work in Progress.	Current Oncology
CLINICAL TRIALS IN THE ERA OF PRECISION ONCOLOGY	Cancer Cure and Consequences on Survivorship Care: Position Paper from the Italian Alliance Against Cancer (ACC) Survivorship Care Working Group.	Cancer Management and Research
CLINICAL TRIALS IN THE ERA OF PRECISION ONCOLOGY	Comparative assessment of early mortality risk upon immune checkpoint inhibitors alone or in combination with other agents across solid malignancies: a systematic review and meta- analysis.	EUROPEAN JOURNAL OF CANCER
CLINICAL TRIALS IN THE ERA OF	Prognostic factors for survival in extensive-stage small cell lung cancer: An Italian real-world retrospective analysis of 244 patients treated over the last decade	Thoracic Cancer
CLINICAL TRIALS IN THE ERA OF PRECISION ONCOLOGY	Cancer Immunotherapy: Harnessing the Immune System to Fight Cancer.	Journal of Clinical Medicine
CLINICAL TRIALS IN THE ERA OF PRECISION ONCOLOGY	Vulvar Malignant Melanoma: A Narrative Review.	Cancers
CLINICAL TRIALS IN THE ERA OF PRECISION ONCOLOGY	A scoping review on the significance of programmed death-ligand 1- inhibiting microRNAs in non-small cell lung treatment: A single-cell RNA sequencing-based study.	Frontiers in Medicine
CLINICAL TRIALS IN THE ERA OF PRECISION ONCOLOGY	Real-world Outcomes of Relapsed/Refractory Diffuse Large B- cell Lymphoma Treated With Polatuzumab Vedotin-based Therapy	HemaSphere
CLINICAL TRIALS IN THE ERA OF PRECISION ONCOLOGY	Clinical Management of Long-Term Survivors after Classical Hodgkin Lymphoma and Diffuse Large B-Cell Lymphoma	Cancers
CLINICAL TRIALS IN THE ERA OF PRECISION ONCOLOGY	The association between albumin levels and survival in patients treated with immune checkpoint inhibitors: A systematic review and meta-analysis.	Frontiers in Molecular Biosciences

CLINICAL TRIALS IN THE ERA OF PRECISION ONCOLOGY	Corticosteroids in oncology: Use, overuse, indications, contraindications. An Italian Association of Medical Oncology (AIOM)/ Italian Association of Medical Diabetologists (AMD)/ Italian Society of Endocrinology (SIE)/ Italian Society of Pharmacology (SIF) multidisciplinary consensus position paper.	CRITICAL REVIEWS IN ONCOLOGY HEMATOLOGY
CLINICAL TRIALS IN THE ERA OF PRECISION ONCOLOGY	Role of Bone Metastases in Patients Receiving Immunotherapy for Pre- Treated Urothelial Carcinoma: The Multicentre, Retrospective Meet- URO-1 Bone Study.	Clinical Genitourinary Cancer
CLINICAL TRIALS IN THE ERA OF PRECISION ONCOLOGY	Breast and Prostate Cancer Risks for Male BRCA1 and BRCA2 Pathogenic Variant Carriers Using Polygenic Risk Scores.	JOURNAL OF THE NATIONAL CANCER INSTITUTE
CLINICAL TRIALS IN THE ERA OF PRECISION ONCOLOGY	Basal and one-month differed neutrophil, lymphocyte and platelet values and their ratios strongly predict the efficacy of checkpoint inhibitors immunotherapy in patients with advanced BRAF wild-type melanoma	Journal of Translational Medicine
CLINICAL TRIALS IN THE ERA OF PRECISION ONCOLOGY	Evaluating the impact of chemotherapy-induced nausea and vomiting on daily functioning in patients receiving dexamethasone- sparing antiemetic regimens with NEPA (netupitant/palonosetron) in the cisplatin setting: results from a randomized phase 3 study.	BMC CANCER
CLINICAL TRIALS IN THE ERA OF PRECISION ONCOLOGY	Detection of ALK fusion variants by RNA-based NGS and clinical outcome correlation in NSCLC patients treated with ALK-TKI sequences.	EUROPEAN JOURNAL OF CANCER
CLINICAL TRIALS IN THE ERA OF PRECISION ONCOLOGY	Effect of systemic therapies or best supportive care after disease progression to both nivolumab and cabozantinib in metastatic renal cell carcinoma: The Meet-Uro 19BEYOND study	Cancer Medicine
CLINICAL TRIALS IN THE ERA OF PRECISION ONCOLOGY	Becoming an older caregiver: A study of gender differences in family caregiving at the end of life	Palliative & Supportive Care

CLINICAL TRIALS IN THE ERA OF PRECISION ONCOLOGY	Clinical characteristics and molecular aspects of low-grade serous ovarian and peritoneal cancer: a multicenter, observational, retrospective analysis of MITO Group (MITO 22).	BRITISH JOURNAL OF CANCER
CLINICAL TRIALS IN THE ERA OF PRECISION ONCOLOGY	Clinicalinsights and prognosticfactors from an advancedbiliarytractcancer case series: a real-world analysis	JOURNAL OF CHEMOTHERAPY
CLINICAL TRIALS IN THE ERA OF PRECISION ONCOLOGY	Efficacy and safety of netupitant/palonosetron combination (NEPA) in preventing nausea and vomiting in non-Hodgkin's lymphoma patients undergoing to chemomobilization before autologous stem cell transplantation.	SUPPORTIVE CARE IN CANCER
CLINICAL TRIALS IN THE ERA OF PRECISION ONCOLOGY	Immunotherapy and Sonpavde score validation in advanced upper tract urothelial carcinoma: a retrospective study by the Italian Network for Research in Urologic- Oncology (Meet-URO group).	Immunotherapy
CLINICAL TRIALS IN THE ERA OF PRECISION ONCOLOGY	Neoadjuvant Nivolumab plus Chemotherapy in Resectable Lung Cancer.	NEW ENGLAND JOURNAL OF MEDICINE
CLINICAL TRIALS IN THE ERA OF PRECISION ONCOLOGY	The Role of Hormonal Replacement Therapy in BRCA Mutated Patients: Lights and Shadows.	INTERNATIONAL JOURNAL OF MOLECULAR SCIENCES
COMPUTATIONAL SCIENCES AND ARTIFICIAL INTELLIGENCE TECHNOLOGIES: DRIVERS FOR A DIGITAL ONCOLOGY	AIRO GORTEC consensus on postoperative radiotherapy (PORT) in low-intermediate risk early stages oral squamous cell cancers (OSCC).	RADIOTHERAPY AND ONCOLOGY
COMPUTATIONAL SCIENCES AND ARTIFICIAL INTELLIGENCE TECHNOLOGIES: DRIVERS FOR A DIGITAL ONCOLOGY	Adequacy of Pain Treatment in Radiotherapy Departments: Results of a Multicenter Study on 2104 Patients (Arise).	Cancers
COMPUTATIONAL SCIENCES AND ARTIFICIAL INTELLIGENCE TECHNOLOGIES: DRIVERS FOR A DIGITAL ONCOLOGY	Identification of early diagnostic biomarkers via WGCNA in gastric cancer.	BIOMEDICINE & PHARMACOTHERAPY
COMPUTATIONAL SCIENCES AND ARTIFICIAL INTELLIGENCE TECHNOLOGIES: DRIVERS FOR A DIGITAL ONCOLOGY	The importance of immune checkpoints in immune monitoring: A future paradigm shift in the treatment of cancer	BIOMEDICINE & PHARMACOTHERAPY
COMPUTATIONAL SCIENCES AND ARTIFICIAL INTELLIGENCE TECHNOLOGIES: DRIVERS FOR A DIGITAL ONCOLOGY	Evolving pancreatic cancer treatment: From diagnosis to healthcare management.	CRITICAL REVIEWS IN ONCOLOGY HEMATOLOGY
COMPUTATIONAL SCIENCES AND ARTIFICIAL INTELLIGENCE TECHNOLOGIES: DRIVERS FOR A DIGITAL ONCOLOGY	Immunotherapy of cancer in single- cell RNA sequencing era: A precision medicine perspective.	BIOMEDICINE & PHARMACOTHERAPY

COMPUTATIONAL SCIENCES AND ARTIFICIAL INTELLIGENCE TECHNOLOGIES: DRIVERS FOR A DIGITAL ONCOLOGY	Prediction and validation of GUCA2B as the hub-gene in colorectal cancer based on co- expression network analysis: In- silico and in-vivo study.	BIOMEDICINE & PHARMACOTHERAPY
COMPUTATIONAL SCIENCES AND ARTIFICIAL INTELLIGENCE TECHNOLOGIES: DRIVERS FOR A DIGITAL ONCOLOGY	Informative Power Evaluation of Clinical Parameters to Predict Initial Therapeutic Response in Patients with Advanced Pleural Mesothelioma: A Machine Learning Approach	Journal of Clinical Medicine
COMPUTATIONAL SCIENCES AND ARTIFICIAL INTELLIGENCE TECHNOLOGIES: DRIVERS FOR A DIGITAL ONCOLOGY	Spatial Transcriptome Uncovers the Mouse Lung Architectures and Functions.	Frontiers in Genetics
COMPUTATIONAL SCIENCES AND ARTIFICIAL INTELLIGENCE TECHNOLOGIES: DRIVERS FOR A DIGITAL ONCOLOGY	Identification of Common and Distinct Pathways in Inflammatory Bowel Disease and Colorectal Cancer: A Hypothesis Based on Weighted Gene Co-Expression Network Analysis.	Frontiers in Genetics
COMPUTATIONAL SCIENCES AND ARTIFICIAL INTELLIGENCE TECHNOLOGIES: DRIVERS FOR A DIGITAL ONCOLOGY	Transcriptomic Profile of the Mouse Postnatal Liver Development by Single-Nucleus RNA Sequencing.	Frontiers in Cell and Developmental Biology
COMPUTATIONAL SCIENCES AND ARTIFICIAL INTELLIGENCE TECHNOLOGIES: DRIVERS FOR A DIGITAL ONCOLOGY	An Invasive Disease Event-Free Survival Analysis to Investigate Ki67 Role with Respect to Breast Cancer Patients; Age: A Retrospective Cohort Study	Cancers
COMPUTATIONAL SCIENCES AND ARTIFICIAL INTELLIGENCE TECHNOLOGIES: DRIVERS FOR A DIGITAL ONCOLOGY	A machine learning approach applied to gynecological ultrasound to predict progression-free survival in ovarian cancer patients	ARCHIVES OF GYNECOLOGY AND OBSTETRICS
COMPUTATIONAL SCIENCES AND ARTIFICIAL INTELLIGENCE TECHNOLOGIES: DRIVERS FOR A DIGITAL ONCOLOGY	A ultrasound-based radiomic approach to predict the nodal status in clinically negative breast cancer patients	Scientific Reports
COMPUTATIONAL SCIENCES AND ARTIFICIAL INTELLIGENCE TECHNOLOGIES: DRIVERS FOR A DIGITAL ONCOLOGY	A Cellular Resolution Spatial Transcriptomic Landscape of the Medial Structures in Postnatal Mouse Brain.	Frontiers in Cell and Developmental Biology
COMPUTATIONAL SCIENCES AND ARTIFICIAL INTELLIGENCE TECHNOLOGIES: DRIVERS FOR A DIGITAL ONCOLOGY	Robustness Evaluation of a Deep Learning Model on Sagittal and Axial Breast DCE?MRIs to Predict Pathological Complete Response to Neoadjuvant Chemotherapy.	Journal of Personalized Medicine
COMPUTATIONAL SCIENCES AND ARTIFICIAL INTELLIGENCE TECHNOLOGIES: DRIVERS FOR A DIGITAL ONCOLOGY	Visual Clustering of Transcriptomic Data from Primary and Metastatic Tumors-Dependencies and Novel Pitfalls.	Genes
COMPUTATIONAL SCIENCES AND ARTIFICIAL INTELLIGENCE TECHNOLOGIES: DRIVERS FOR A DIGITAL ONCOLOGY	The expression pattern of Immune checkpoints after chemo/radiotherapy in the tumor microenvironment.	Frontiers in Immunology

COMPUTATIONAL SCIENCES AND ARTIFICIAL INTELLIGENCE TECHNOLOGIES: DRIVERS FOR A DIGITAL ONCOLOGY	Accurate Evaluation of Feature Contributions for Sentinel Lymph Node Status Classification in Breast Cancer	Applied Sciences-Basel
COMPUTATIONAL SCIENCES AND ARTIFICIAL INTELLIGENCE TECHNOLOGIES: DRIVERS FOR A DIGITAL ONCOLOGY	Identifying optimal first-line treatment for advanced non-small cell lung carcinoma with high PD-L1 expression: a matter of debate	BRITISH JOURNAL OF CANCER
COMPUTATIONAL SCIENCES AND ARTIFICIAL INTELLIGENCE TECHNOLOGIES: DRIVERS FOR A DIGITAL ONCOLOGY	A machine learning ensemble approach for 5- And 10-year breast cancer invasive disease event classification.	PLoS One
COMPUTATIONAL SCIENCES AND ARTIFICIAL INTELLIGENCE TECHNOLOGIES: DRIVERS FOR A DIGITAL ONCOLOGY	NDG-CAM: Nuclei Detection in Histopathology Images with Semantic Segmentation Networks and Grad-CAM.	Bioengineering-Basel
COMPUTATIONAL SCIENCES AND ARTIFICIAL INTELLIGENCE TECHNOLOGIES: DRIVERS FOR A DIGITAL ONCOLOGY	Transfer learning approach based on computed tomography images for predicting late xerostomia after radiotherapy in patients with oropharyngeal cancer	Frontiers in Medicine
COMPUTATIONAL SCIENCES AND ARTIFICIAL INTELLIGENCE TECHNOLOGIES: DRIVERS FOR A DIGITAL ONCOLOGY	HER2-Low Status Does Not Affect Survival Outcomes of Patients with Metastatic Breast Cancer (MBC) Undergoing First-Line Treatment with Endocrine Therapy plus Palbociclib: Results of a Multicenter, Retrospective Cohort Study.	Cancers
SCIENZE COMPUTAZIONALI E TECNOLOGIE DI INTELLIGENZA ARTIFICIALE: DRIVER PER UNA ONCOLOGIA DIGITALE	Spatially resolved gene regulatory and disease-related vulnerability map of the adult Macaque cortex.	Nature Communications
SCIENZE COMPUTAZIONALI E TECNOLOGIE DI INTELLIGENZA ARTIFICIALE: DRIVER PER UNA ONCOLOGIA DIGITALE	Trans-Arterial Chemoembolization Plus Systemic Treatments for Hepatocellular Carcinoma: An Update.	Journal of Personalized Medicine
SCIENZE COMPUTAZIONALI E TECNOLOGIE DI INTELLIGENZA ARTIFICIALE: DRIVER PER UNA ONCOLOGIA DIGITALE	A deep learning model based on whole slide images to predict disease-free survival in cutaneous melanoma patients.	Scientific Reports
SCIENZE COMPUTAZIONALI E TECNOLOGIE DI INTELLIGENZA ARTIFICIALE: DRIVER PER UNA ONCOLOGIA DIGITALE	Prediction of Breast Cancer Histological Outcome by Radiomics and Artificial Intelligence Analysis in Contrast-Enhanced Mammography	Cancers
SCIENZE COMPUTAZIONALI E TECNOLOGIE DI INTELLIGENZA ARTIFICIALE: DRIVER PER UNA ONCOLOGIA DIGITALE	Host immune-inflammatory markers to unravel the heterogeneous outcome and assessment of patients with PD-L1 ¿50% metastatic non- small cell lung cancer and poor performance status receiving first- line immunotherapy.	Thoracic Cancer

SCIENZE COMPUTAZIONALI E TECNOLOGIE DI INTELLIGENZA ARTIFICIALE: DRIVER PER UNA ONCOLOGIA DIGITALE	PANHER study: a 20-year treatment out come analysis from a multicentre observational study of HER2- positive advanced breast cancer patients from the real-world setting	Therapeutic Advances in Medical Oncology
SCIENZE COMPUTAZIONALI E TECNOLOGIE DI INTELLIGENZA ARTIFICIALE: DRIVER PER UNA ONCOLOGIA DIGITALE	Second-line treatments for Advanced Hepatocellular Carcinoma: A Systematic Review and Bayesian Network Meta- analysis	CLINICAL AND EXPERIMENTAL MEDICINE
NEW ORGANIZATIONAL- MANAGEMENT MODELS IN ONCOLOGY	Minimally-invasive treatments for benign thyroid nodules: recommendations for information to patients and referring physicians by the Italian Minimally-Invasive Treatments of the Thyroid group.	ENDOCRINE
NEW ORGANIZATIONAL- MANAGEMENT MODELS IN ONCOLOGY	Risk factors for anastomotic leakage after anterior resection for rectal cancer (RALAR study): A nationwide retrospective study of the Italian Society of Surgical Oncology Colorectal Cancer Network Collaborative Group	Colorectal Disease
NEW ORGANIZATIONAL- MANAGEMENT MODELS IN ONCOLOGY	Current practice on the use of prophylactic drain after gastrectomy in Italy: the Abdominal Drain in Gastrectomy (ADiGe) survey.	Updates in Surgery
NEW ORGANIZATIONAL- MANAGEMENT MODELS IN ONCOLOGY	ERAS program adherence- institutionalization, major morbidity and anastomotic leakage after elective colorectal surgery: the iCral2 multicenter prospective study.	SURGICAL ENDOSCOPY AND OTHER INTERVENTIONAL TECHNIQUES
NEW ORGANIZATIONAL- MANAGEMENT MODELS IN ONCOLOGY	Understanding the lived experience of lung cancer: a European social media listening study.	BMC CANCER
NEW ORGANIZATIONAL- MANAGEMENT MODELS IN ONCOLOGY	Identification and Assessment of Risks in Biobanking: The Case of the Cancer Institute of Bari.	Cancers
NEW ORGANIZATIONAL- MANAGEMENT MODELS IN ONCOLOGY	Aplastic Anemia as a Roadmap for Bone Marrow Failure: An Overview and a Clinical Workflow	INTERNATIONAL JOURNAL OF MOLECULAR SCIENCES
NEW ORGANIZATIONAL- MANAGEMENT MODELS IN ONCOLOGY	International good practices on central venous catheters' placement and daily management in adults and on educational interventions addressed to healthcare professionals or awake/outpatients. Results of a scoping review compared with the existent Italian	Frontiers in Medicine

NEW ORGANIZATIONAL- MANAGEMENT MODELS IN	Malnutrition management in oncology: An expert view on controversial issues and future	
ONCOLOGY	perspectives.	Frontiers in Oncology
NEW ORGANIZATIONAL- MANAGEMENT MODELS IN ONCOLOGY	Evaluation of Intraoperative End- Tidal Carbon Dioxide Change Relates to Length Hospitalisation in Peridiaphragmatic Surgery: A Pilot Study	Advances in Experimental Medicine and Biology
NEW ORGANIZATIONAL- MANAGEMENT MODELS IN ONCOLOGY	Nutritional support in surgical oncology: A survey by SICO in collaboration with the Intersociety Italian Working Group for Nutritional Support in Cancer Patients.	SURGICAL ONCOLOGY-OXFORD
NEW ORGANIZATIONAL- MANAGEMENT MODELS IN ONCOLOGY	Bridging therapeutic opportunities: a survey by the Italian molecular tumor board workgroup of Alliance Against Cancer.	JOURNAL OF EXPERIMENTAL & CLINICAL CANCER RESEARCH
NEW ORGANIZATIONAL- MANAGEMENT MODELS IN ONCOLOGY	Lean Perspectives in an Organizational Change in a Scientific Direction of an Italian Research Institute: Experience of the Cancer Institute of Bari.	International Journal of Environmental Research and Public Health
Eranet and Ministry of Foreign Affairs and Network Projects	Development of Approaches and Metrics to Measure the Impact and Improve the Clinical Outcomes of Patients With Frailty in the Era of COVID-19. The COMETA Italian Protocol	Frontiers in Oncology
Eranet and Ministry of Foreign	COVID-19 infection in acute lymphoblastic leukemia over 15 months of the pandemic. A Campus	Haematologica-The Hematology
Eranet and Ministry of Foreign Affairs and Network Projects.	SARS-CoV-2 Omicron variant in cancer patients: An insight into the vaccine booster debate	Future Oncology
Eranet and Ministry of Foreign Affairs and Network Projects.	Editorial: The Effect of the COVID- 19 Pandemic on Cancer Patients and Healthcare.	Frontiers in Oncology
Eranet and Ministry of Foreign Affairs and Network Projects.	(Co & Co): The Never Ending Story	Frontiers in Cardiovascular Medicine
Eranet and Ministry of Foreign Affairs and Network Projects.	Nutrition as Personalized Medicine against SARS-CoV-2 Infections: Clinical and Oncological Options with a Specific Female Groups Overview.	INTERNATIONAL JOURNAL OF MOLECULAR SCIENCES
Eranet and Ministry of Foreign	SARS-CoV-2 and Skin: New Insights	
Eranet and Ministry of Foreign Affairs and Network Projects.	SARS-CoV-2 Vaccines and Adverse Effects in Gynecology and Obstetrics: The First Italian Retrospective Study.	International Journal of Environmental Research and Public Health
Eranet and Ministry of Foreign Affairs and Network Projects.	Can vitamin D status influence seroconversion to SARS-COV2 vaccines?	Frontiers in Immunology

Eranet and Ministry of Foreign Affairs and Network Projects.	Safety of third dose of COVID-19 vaccination in frail patients: Results from the prospective Italian VAX4FRAIL study.	Frontiers in Oncology
Eranet and Ministry of Foreign Affairs and Network Projects.	A Case of Purpura Annularis Telangiectodes of Majocchi after Anti-SARS-CoV-2 Pfizer-BioNTech Vaccine: Is There an Association?	Vaccines