U.S. FOOD & DRUG ADMINISTRATION

FDA Oncology Center of Excellence and the BAA program

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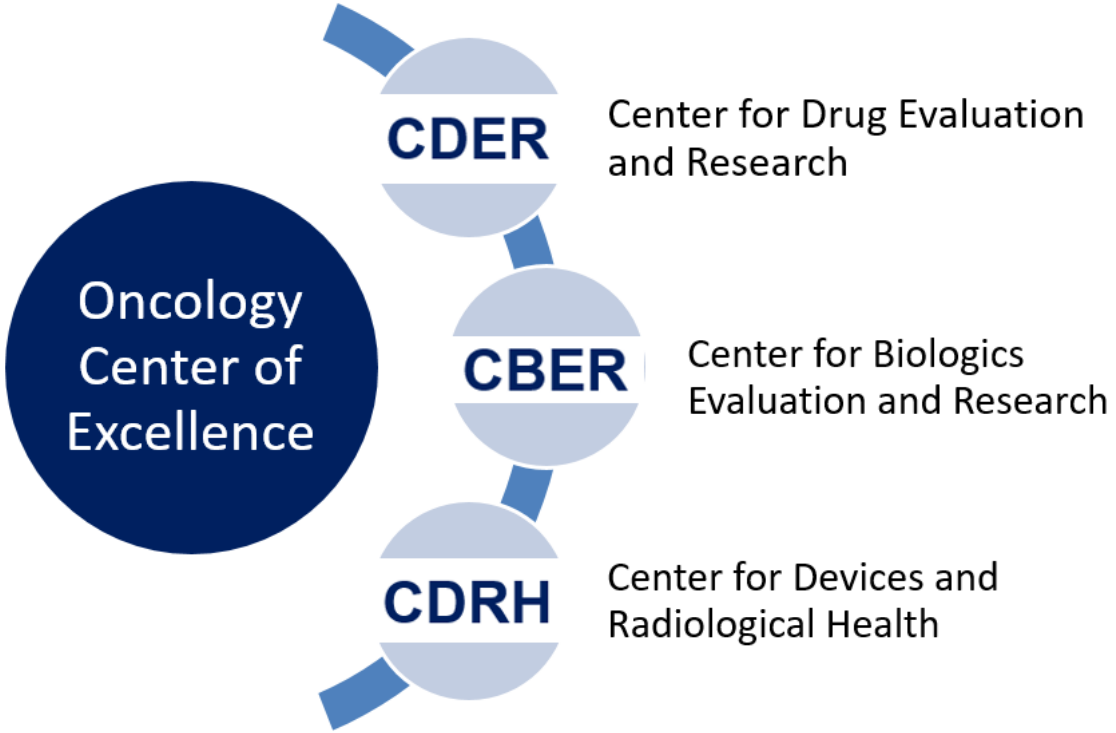
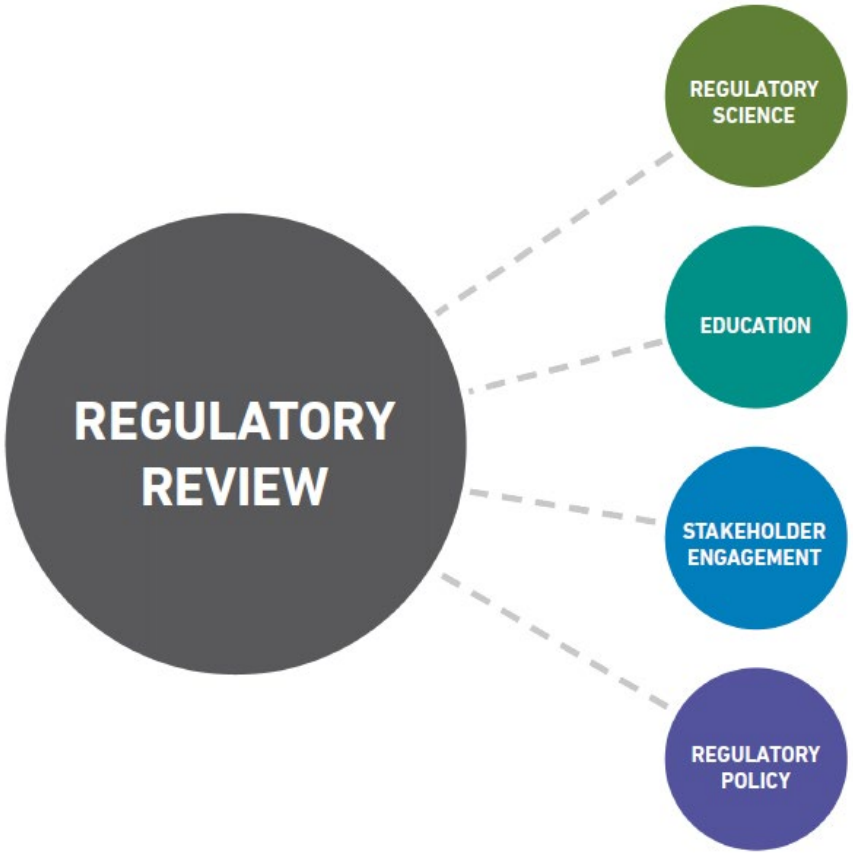
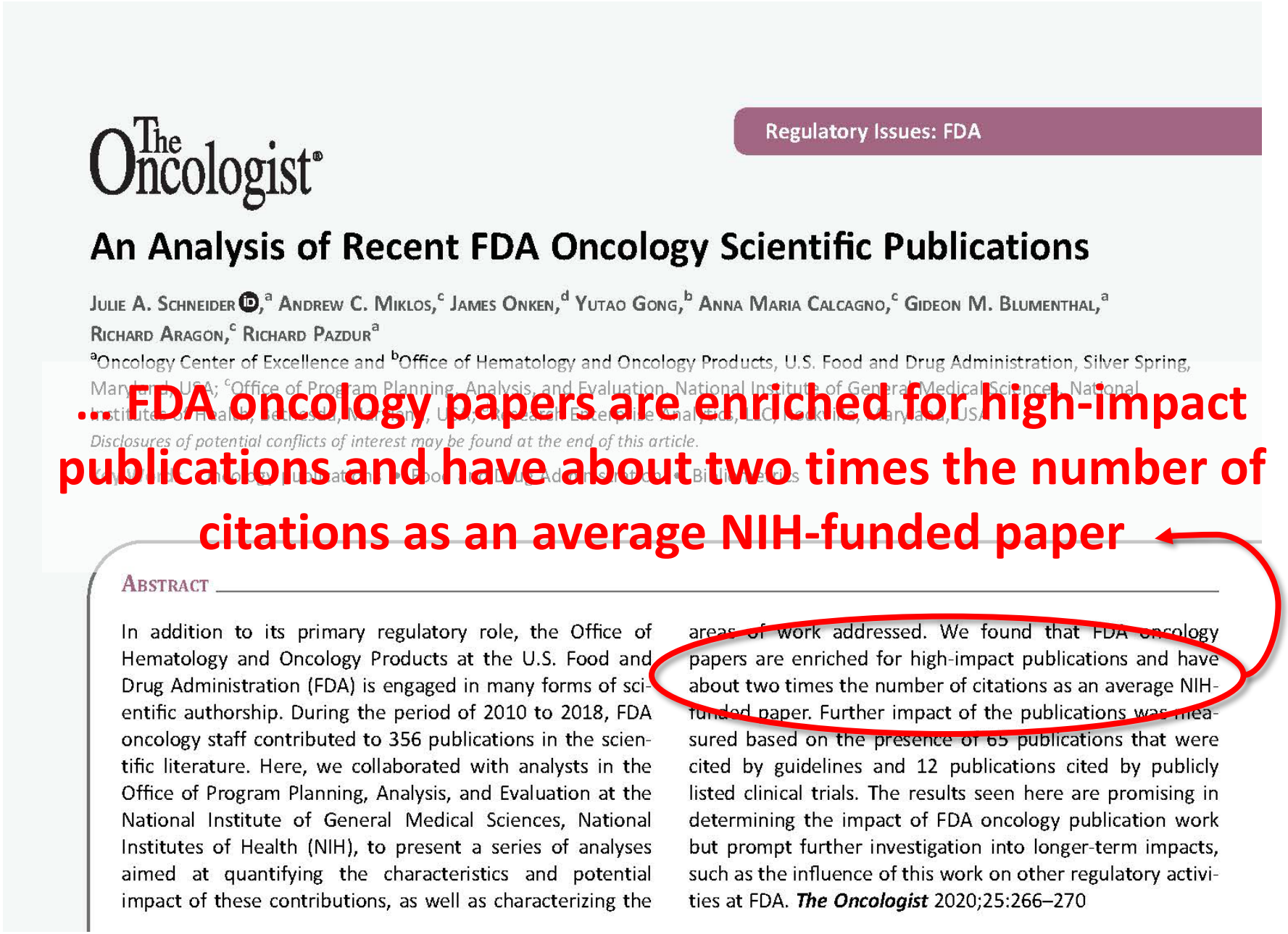
Introduction to the Oncology Center of Excellence

The mission of the Oncology Center of Excellence is to achieve **patient-centered** regulatory decision-making through innovation and collaboration



Introduction to the Oncology Center of Excellence





The Oncologist®

Regulatory Issues: FDA

An Analysis of Recent FDA Oncology Scientific Publications

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Disclosures of potential conflicts of interest may be found at the end of this article.

…FDA oncology papers are enriched for high-impact publications and have about two times the number of citations as an average NIH-funded paper

Abstract

In addition to its primary regulatory role, the Office of Hematology and Oncology Products at the U.S. Food and Drug Administration (FDA) is engaged in many forms of scientific authorship. During the period of 2010 to 2018, FDA oncology staff contributed to 356 publications in the scientific literature. Here, we collaborated with analysts in the Office of Program Planning, Analysis, and Evaluation at the National Institute of General Medical Sciences, National Institutes of Health (NIH), to present a series of analyses aimed at quantifying the characteristics and potential impact of these contributions, as well as characterizing the areas of work addressed. We found that FDA oncology papers are enriched for high-impact publications and have about two times the number of citations as an average NIH-funded paper. Further impact of the publications was measured based on the presence of 65 publications that were cited by guidelines and 12 publications cited by publicly listed clinical trials. The results seen here are promising in determining the impact of FDA oncology publication work but prompt further investigation into longer-term impacts, such as the influence of this work on other regulatory activities at FDA. ***The Oncologist*** 2020;25:266–270

OCE Scientific Collaborative mission

Support FDA scientific staff to plan and conduct high quality applied research that addresses challenges identified during regulatory review of oncology therapeutics

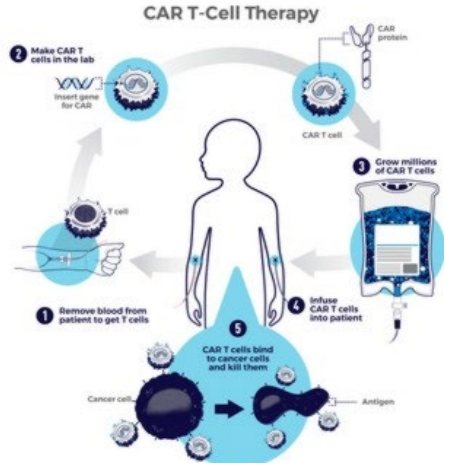
OCE SCIENTIFIC COLLABORATIVE
Bringing Science to Regulation

OCE scientific interest areas

Cell /Gene and personalized neo-antigen-based therapies for cancer
Health equity and special populations in oncology clinical trials
Immuno-oncology
Oncology trial designs, end points and statistical methodologies
Pediatric oncology
Precision oncology
Oncology patient-focused drug development
Oncology safety
Rare cancers
Real world data utilization (cross cutting)

OCE scientific interest areas

Cell/gene and personalized neo-antigen-based therapies for cancer
Applied research related to clinical development, safety evaluation, manufacturing, and quality control of innovative approaches such as gene editing-based technology (e.g., CRISPR-Cas9), cell therapy (e.g., TIL, TCR-T, CAR-T) for solid and hematologic malignancies, and neo-antigen-based cancer therapy.



For more information, see:
https://www.fda.gov/about-fda/oncology-center-excellence/oce-scientific-collaborative
https://pubmed.ncbi.nlm.nih.gov/33910935/

OCE scientific interest areas

Health equity and special populations in oncology drug development
Applied research to understand the factors that affect the safety and treatment response in demographic subgroups that have been historically underrepresented in oncology trials (e.g., racial/ethnic minorities, sexual and gender minorities, older adults).

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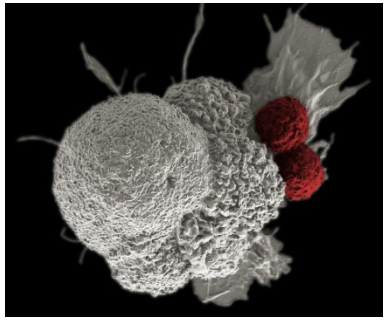
OCE scientific interest areas

Immuno-oncology
Applied research to analyze clinical and scientific issues unique to regulatory submissions of immuno-oncology products such as understanding unique side effects and atypical responses (e.g., delayed progression, pseudo-progression) to immune checkpoint inhibitors.



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OCE scientific interest areas

Oncology patient-focused drug development
Applied research to promote scientifically rigorous use of clinical outcome measures to quantify symptoms and function in oncology. Develop and create standard clinical endpoints, analytic and visualization methods, and use of digital health technology to further characterize a products safety and efficacy.

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OCE scientific interest areas

Oncology trial designs, endpoints and statistical methodologies
Innovative approaches for statistical analyses of oncology clinical trials. Identify and refine real world endpoints (e.g., defined and extracted using EHR data) that could be used in clinical studies to inform regulatory submissions.

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OCE scientific interest areas

Oncology therapeutic safety
New approaches to allow for consistent and rigorous analysis of safety signals throughout the lifecycle of oncology therapeutics and to improve understanding of toxicity from oncology therapeutics in the patient population. Explore use of real-world data to inform post-marketing safety.

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OCE scientific interest areas

Pediatric oncology
Applied research to accelerate the development of oncology therapeutics for children, for example through developing new preclinical models, novel trial designs, and use of real world data.

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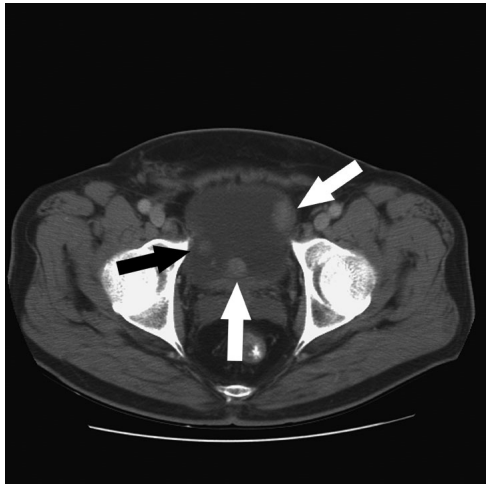
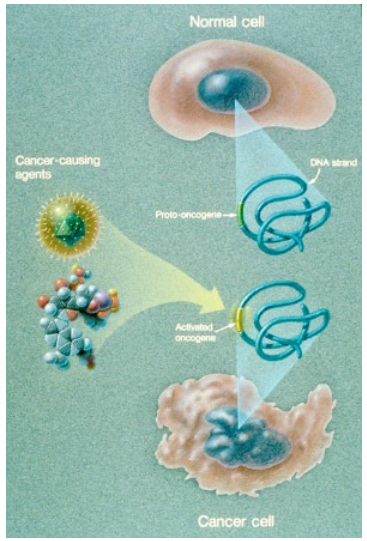
OCE scientific interest areas

Precision oncology
Applied research to develop and deploy biomarkers (e.g., molecular, imaging) to accelerate and improve regulatory review of oncology therapeutics.





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OCE scientific interest areas

Rare cancers
Applied research to develop new approaches to support drug development in rare cancers such as drug repurposing, telemedicine and innovative trial designs and analysis of real world data.

For more information, see:
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OCE scientific interest areas

Oncology real world data utilization (cross-cutting)
Approaches to evaluate, integrate, and facilitate the use of oncology real world data (e.g., electronic health records, administrative health claims, drug or disease registries, patient reported or generated health data) to generate high quality real world evidence

For more information, see:
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Active OCE-funded projects through the BAA program

Topic	Title	Institution
Patient Focused Drug Development	Evaluating Physical Functioning Using Patient-Reported Outcome Measures: How does the question form and recall period influence patients' interpretation?	Duke
Patient Focused Drug Development	Evaluation of a Global Item for side effect bother	Northwestern
Pediatric Oncology	Pediatric High-Risk Cancer Preclinical Model Resource	Children's Hospital of Philadelphia
Pediatric Oncology	Modeling Pediatric Solid Tumors and the Tumor Microenvironment	St. Jude's
RWD Utilization	Integrating Clinical Trials and Real World Endpoints Data (ICAREdata) Data Capture and Standardization Study	NCTN-Alliance
RWD Utilization	Adverse Event Reporting in the Integrating Clinical Trials and Real World Endpoints Data (ICAREdata) Initiative	NCTN-Alliance
RWD Utilization	Development of a Novel Methodology for Endpoints Assessing Cardinal Health Response to Lymphoma Treatment in Real-World Studies	Cardinal Health
RWD Utilization	Calibrating RWE studies in oncology against randomized trials	Brigham and Women's Hospital, Harvard Medical School
RWD Utilization	Real World Collection of Radiographic Images and Treatment Emergent Adverse Event Data: Next Phase Development of ICAREdata Research Infrastructure	Alliance NCTN Foundation
RWD Utilization/ Health Equity	Analyzing clinical outcomes and genomic data of American Indian patient population treated with immune checkpoint inhibitors for various cancers	University of Oklahoma
Stats/Trial Designs	Estimation of causal treatment effects in hematologic oncology (HO) trials in the presence of multiple subsequent therapies	Medical College of Wisconsin
Stats/Trial Designs	Commensurate prior models accommodating historical controls for clinical trials with matched and/or interval-censored data	Medical College of Wisconsin

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Questions?

Please contact: FDAOncology@fda.hhs.gov