

MARCH 28-29, 2022 | NCI BSA MEETING

FY 2023 SBIR CONTRACT TOPICS

Deepa Narayanan
*Lead Program Director
SBIR Development Center
National Cancer Institute*



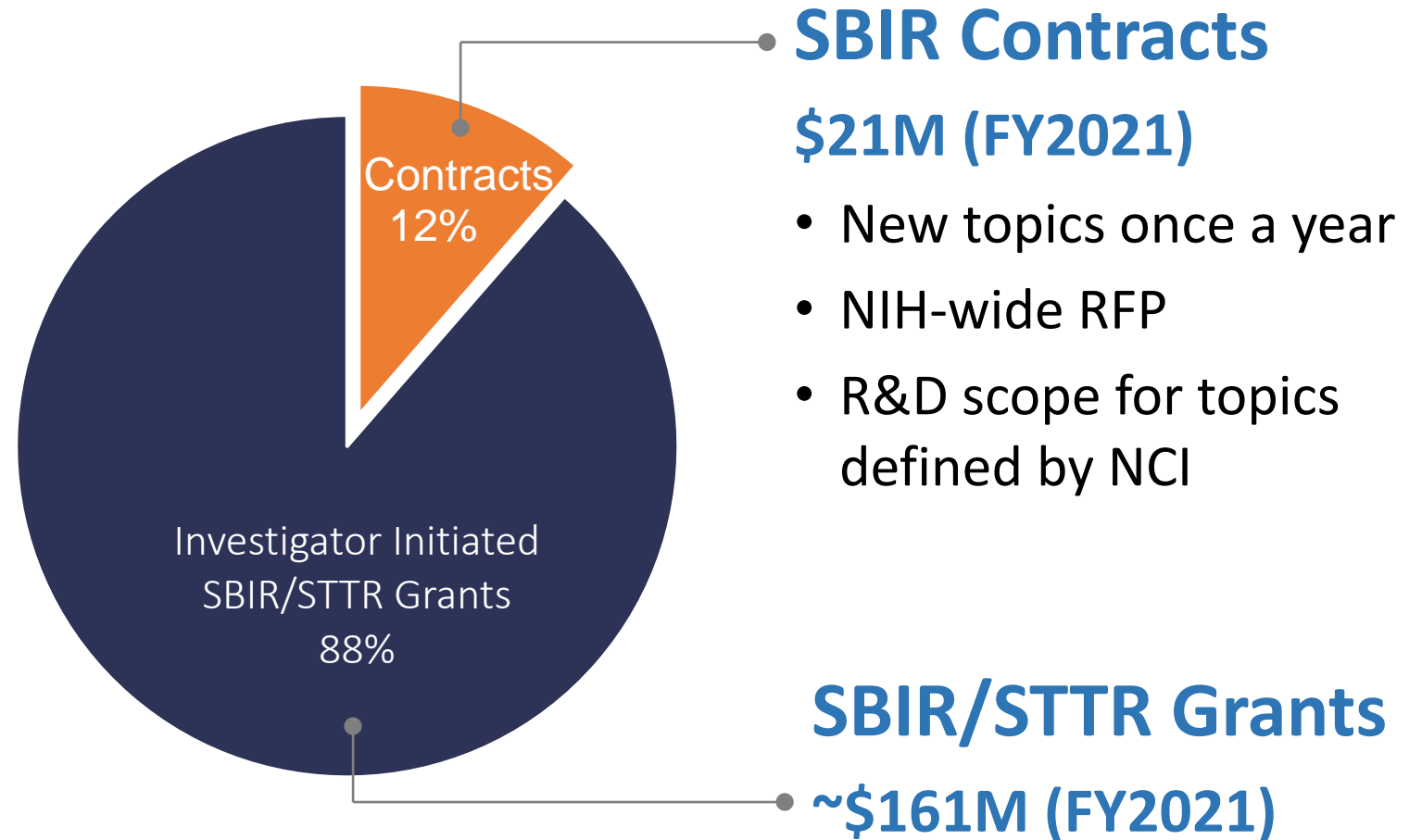
NCI SBIR SUPPORTS GRANTS & CONTRACTS

SBIR

Small Business
Innovation Research
(3.2%)

STTR

Small Business
Technology Transfer
(0.45%)



WHY DOES NCI SBIR FUND R&D CONTRACTS?



Addressing
Specific Cancer
Community
Needs.



Stimulating
Commercialization
in Emerging Areas.

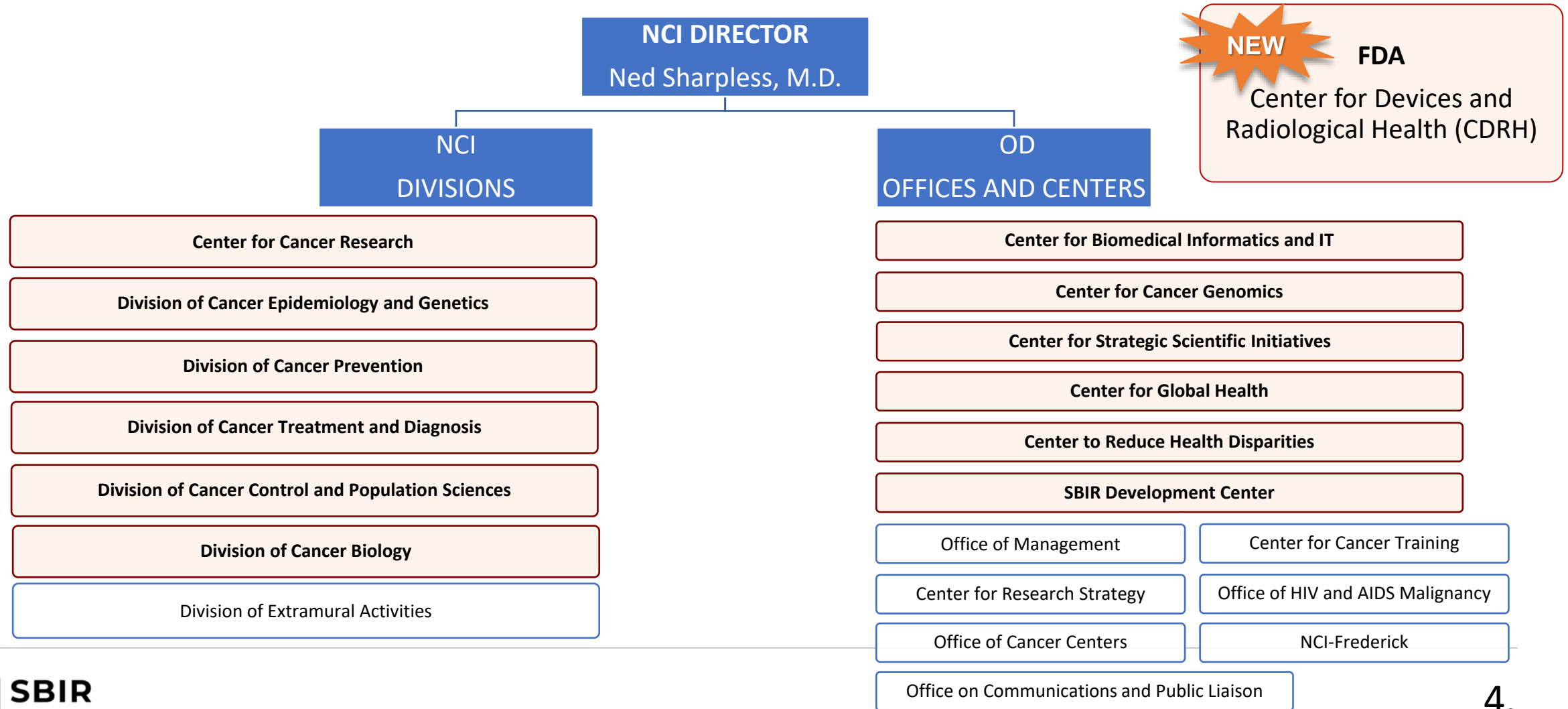


Streamlined
Stepwise Product
Development.

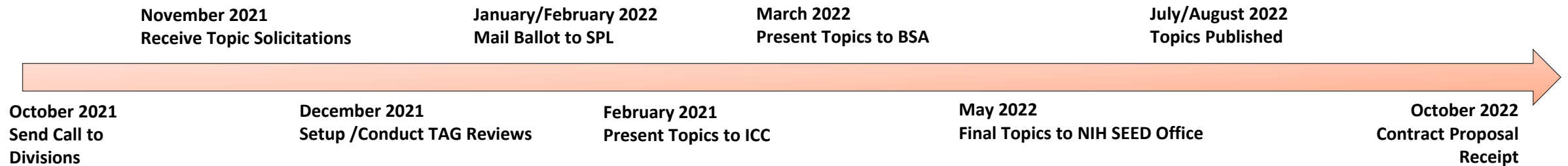


Technology
Transfer from
NIH Labs to
Industry

HOW DOES NCI SBIR DEVELOP CONTRACT TOPICS?



CONTRACT TOPIC SELECTION PROCESS – FY2023



9 Topics	Therapeutics	Medical Devices	Clinical Diagnostics and Molecular Analysis	Information Technology and Bioinformatics
	1	3	3	2

THERAPEUTICS

Topic Title	Overall Goal
<p data-bbox="180 508 1085 615">Development of Senotherapeutic Agents for Cancer Treatment</p> <ul data-bbox="180 651 945 808" style="list-style-type: none"><li data-bbox="180 651 652 696">▪ <i>Div. of Cancer Biology</i><li data-bbox="180 708 945 753">▪ <i>Div. Cancer Treatment and Diagnosis</i><li data-bbox="180 765 728 808">▪ <i>SBIR Development Center</i>	<p data-bbox="1110 508 2219 665">Support the basic and pre-clinical development of senotherapeutic agents for use in research, neoadjuvant, adjuvant, or combination cancer therapy.</p> <p data-bbox="1110 736 1569 779"><i># This topic is a re-issue</i></p> <p data-bbox="2232 786 2323 815"><i>Page 6</i></p>

MEDICAL DEVICES

Topic Title	Overall Goal
<p data-bbox="180 429 945 668">Non-invasive Device Technology Research & Development for Chemotherapy-induced Peripheral Neuropathy Management</p> <ul data-bbox="180 701 736 746" style="list-style-type: none"><li data-bbox="180 701 736 746">▪ <i>Center for Cancer Training</i>	<p data-bbox="1116 429 2303 644">Advance the development of innovative non-invasive device technologies to provide effective mitigation of CIPN in a non-invasive, cost-effective, accessible manner in the home-care setting.</p> <p data-bbox="1116 715 2201 815"><i>Moonshot Rec. (J)</i> development of new enabling cancer technologies</p> <p data-bbox="1116 829 2308 929"><i>Moonshot Rec. (F)</i> minimizing cancer treatment’s debilitating side-effects</p> <p data-bbox="2237 939 2328 972"><i>Page 7</i></p>
<p data-bbox="180 1001 952 1110">Wearable Devices for Dosimetry of Radiopharmaceutical Therapy</p> <ul data-bbox="180 1129 952 1175" style="list-style-type: none"><li data-bbox="180 1129 952 1175">▪ <i>Div. Cancer Treatment and Diagnosis</i>	<p data-bbox="1116 1015 2308 1286">Develop wearable technologies (e.g., dosimetry sensor-incorporated clothing) to allow radiopharmaceutical therapy dose to be continuously measured providing rich, time-based dose data for RPT agents that can be correlated with the patient’s anatomy.</p> <p data-bbox="2237 1300 2328 1333"><i>Page 8</i></p>

MEDICAL DEVICES

Topic Title	Overall Goal
<p data-bbox="180 582 1029 753">Wearable Technologies to Facilitate Remote Monitoring of Cancer Patients Following Treatment</p> <ul data-bbox="180 825 1003 982" style="list-style-type: none"><li data-bbox="180 825 1003 872">▪ <i>Center for Strategic Scientific Initiatives</i><li data-bbox="180 882 1003 929">▪ <i>Div. Cancer Treatment and Diagnosis</i><li data-bbox="180 939 1003 986">▪ <i>Center for Cancer Research</i>	<p data-bbox="1110 582 2318 853">Improve the availability of new and/or better remote monitoring tools for patients and their clinical care teams during sensitive periods of treatment with a view to improved health-related Quality of Life and reduced costs associated with further hospital visits.</p> <p data-bbox="1110 982 2308 1082"><i>Moonshot Rec. (F)</i> minimizing cancer treatment’s debilitating side-effects</p> <p data-bbox="2232 1089 2321 1118"><i>Page 9</i></p>

CLINICAL DIAGNOSTICS & MOLECULAR ANALYSIS

Topic Title	Overall Goal
<p>Technology Platforms for Circulating Tumor-Macrophage Hybrid Cells</p> <ul style="list-style-type: none"> ▪ <i>Div. of Cancer Control and Population Sciences</i> ▪ <i>Center for Strategic Scientific Initiatives</i> ▪ <i>Div. Cancer Treatment and Diagnosis</i> ▪ <i>National Center for Advancing Translational Science</i> 	<p>Support the development of platforms to isolate, enrich, enumerate, and identify the cTMHCs in blood from cancer patients or animal models of cancer. This contract topic aims to enable thorough understanding of the biology of THMCs in metastasis and provide a novel means to remotely monitor cancer progression and metastasis.</p> <p><i>Moonshot Rec. (J)</i> development of new enabling cancer technologies including molecular analysis technologies</p> <p style="text-align: right;"><i>Page 10</i></p>
<p>Rapid and Affordable Point-of-Care HPV Diagnostics for Cervical Cancer Control</p> <ul style="list-style-type: none"> ▪ <i>Div. of Cancer Prevention</i> ▪ <i>Center for Global Health</i> 	<p>Advance the development of new alternatives for HPV testing to the market that are both in a form factor as well as price point that will enable self-testing programs to be established globally.</p> <p style="text-align: right;"><i>Page 11</i></p>

CLINICAL DIAGNOSTICS & MOLECULAR ANALYSIS

Topic Title	Overall Goal
<p data-bbox="180 478 970 711">Translation of Novel Cancer-Specific Imaging Agents and Techniques to Mediate Successful Image-Guided Cancer Interventions</p> <ul data-bbox="180 735 955 778" style="list-style-type: none"><li data-bbox="180 735 955 778">▪ <i>Div. Cancer Treatment and Diagnosis</i>	<p data-bbox="1113 478 2318 749">Support the translation of novel activatable agents and/or techniques for sensitive cancer detection in human subjects. Ideally this would translate existing pre-clinical successes with activatable diagnostic probes to clinical tools that can detect small tumor cell clusters (~1mm³ in volume) via imaging.</p> <p data-bbox="1113 821 2204 921"><i>Moonshot Rec. (J)</i> development of new enabling cancer technologies including early detection</p> <p data-bbox="2216 935 2318 963"><i>Page 12</i></p>

INFORMATION TECHNOLOGY & BIOINFORMATICS

Topic Title	Overall Goal
<p>Digital Tools to Integrate Cancer Prevention Within Primary Care</p> <ul style="list-style-type: none">▪ <i>Div. Cancer Prevention</i>	<p>Develop a digital platform that provides PCPs with validated cancer risk assessment tools, cancer prevention guidelines, and clinical recommendations based on a patient's risk factors to discuss with their patients.</p> <p><i>Moonshot Rec. (J)</i> development of new enabling cancer technologies</p> <p style="text-align: right;"><i>Page 13</i></p>
<p>Software to Evaluate Artificial Intelligence/Machine Learning Medical Devices in Oncology Settings</p> <ul style="list-style-type: none">▪ <i>Food and Drug Administration</i>▪ <i>SBIR Development Center</i>	<p>Stimulate the participation of small businesses in the FDA's Medical Device Development Tool (MDDT) program to develop software tools for evaluating and monitoring AI/ML devices in oncology settings.</p> <p style="text-align: right;"><i>Page 14</i></p>

SUCCESS STORIES



RADTOX – cfDNA TEST

Monitoring radiation therapy toxicity in cancer patients



INSIGHT-RET SCREEN

CLIA-validated assay that detects oncogenic RET (rearranged during transfection) expression in non-small cell lung cancer (NSCLC) patients



DIGITAL CLINICAL TRIAL PLATFORM

Global Screening & Enrollment, Virtual Consent, Telemedicine & ePRO, and Electronic Clinical Outcome Assessment



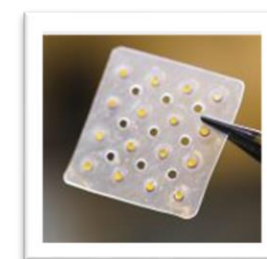
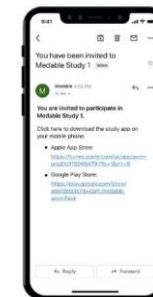
CLEARID® BREAST CANCER TEST

Identifies circulating tumor cell burden and detects emerging genetic alterations that are associated with therapy resistance



BRACHYTHERAPY DEVICE

510(K) approved, device used in clinics for lung, pancreas, colorectal, sarcoma and head & neck cancers.



THANK YOU

NCI SBIR DEVELOPMENT CENTER
ncisbir@mail.nih.gov
240.276.5300

