



National
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Cancer
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NCCN Specialized Imaging Research Consortium™ (SIRC)



NCCN.org/sirc

The National Comprehensive Cancer Network® (NCCN®) has established the NCCN Specialized Imaging Research Consortium™ (SIRC) to foster and support oncology research and extend technology development in specialized imaging to lead to improved patient outcomes. SIRC brings together imaging scientists, oncologists, and experts from NCCN Member Institutions to collaborate and find answers to important questions. NCCN Member Institutions see a diverse patient population and all possess high quality basic science laboratories and specialized imaging capabilities. Bringing sites together in the context of the SIRC results in a consortium that is greater than the sum of its parts. SIRC enhances NCCN Member Institutions' ability to evaluate and guide the use of imaging in clinical cancer care and to conduct oncology therapeutic trials that involve imaging.

Background

The use of specialized imaging technologies, including positron emission tomography (PET), PET computed tomography (PET/CT), along with the PET radiopharmaceutical ¹⁸F-fluorodeoxyglucose (¹⁸F-FDG), dynamic contrast enhanced-magnetic resonance imaging (DCE-MRI), and contrast-enhanced ultrasound (CEUS), are being used more frequently in oncology. Molecularly targeted imaging agents expand the capabilities of conventional anatomical imaging methods and allow visualization of the expression and activity of specific molecules (e.g., proteases and protein kinases) and biological processes (e.g., apoptosis, angiogenesis, genetic expression and metastasis) that influence tumor behavior and/or response to therapy. This information may have a major impact on cancer detection, individualized treatment, response monitoring, and drug development, and also increases the knowledge and understanding of how cancer arises and how therapy affects the cancer.

Conducting multi-institutional clinical trials using these imaging technologies has historically been problematic due to the need for standardized equipment. It is a necessity that all equipment at all sites involved in a clinical trial are validated to provide similar quantitative results. SIRC maintains the infrastructure required for accrual of sufficient numbers of patients from participating sites to adequately power multi-institutional clinical studies. Through its collaboration with the Society of Nuclear Medicine's Clinical Trials Network, SIRC ensures quality imaging is conducted on validated equipment across research sites, thus allowing data from various sites to be accurately compared and analyzed.

Imaging plays an important role in clinical cancer care. The increasing availability and use of advanced imaging methods creates a need for expertise in these techniques in order to guide their appropriate use in the diagnosis and treatment of cancer patients. Imaging is an important component of the NCCN Clinical Practice Guidelines in Oncology (NCCN Guidelines™). Members of SIRC may participate on some NCCN Guidelines Panels that provide specialized expertise on the types of imaging studies needed to evaluate specific clinical situations.



SIRC Overview

SIRC includes NCCN Member Institutions in this multidisciplinary network of highly specialized investigators to efficiently evaluate technically challenging and innovative treatment approaches using specialized imaging technologies. SIRC conceives, develops, and conducts collaborative Pilot and Phase I and II clinical trials of promising new therapeutic agents and approaches for the treatment of malignancies in patients. Consortium members are selected for their documented ability to develop and conduct clinical trials of innovative treatment approaches and for their multidisciplinary expertise in supporting innovative clinical research. SIRC institutions are responsible for proposing and conducting clinical evaluations of new treatment approaches, while the NCCN Oncology Research Program (ORP) is responsible for providing operational support to implement SIRC protocols.

Consortium Advisory Group

SIRC is advised by an inter-disciplinary Consortium Advisory Group (CAG) which has clearly defined oversight and quality control functions. CAG works with the NCCN ORP to shape the goals, strategy and implementation of the SIRC.

The Chair of CAG is responsible for presiding over periodic meetings. CAG members, representing NCCN Member Institutions, are appointed to reflect a range of expertise in various specialized imaging modalities and medical oncology. The Chair adds experts in addition to the normal CAG members when necessary. CAG is supported by the NCCN ORP staff that circulates clinical trial proposals and protocols for appraisal, review, or comment and establishes CAG meeting agendas in consultation with the Chair.

CAG is expected to:

- review and advise on the overall direction of the SIRC
- advise on structural or organizational issues and on commissioning research concepts from consortium members
- review research proposals and protocols to ensure they meet SIRC criteria
- review monitoring reports, advising the NCCN ORP on any remedial action needed
- advise on effective partnerships with target pharmaceutical and medical device companies
- assist with arranging any periodic independent reviews of specific research and of other consortium activities
- review the annual SIRC report and endorse its content

For a complete listing of CAG Members, visit NCCN.org/sirc.

SIRC Mission

The mission of SIRC is to advance the treatment of patients with cancer through the clinical application of specialized imaging technologies by performing high-quality clinical trials of emerging therapeutics integrated with evidence-based research to guide the use of advanced imaging in clinical cancer care.

In particular, SIRC aims to:

- establish and standardize new models for predicting and monitoring response to therapy
- develop a better understanding of the mechanisms of tumor resistance
- use imaging and analytic systems to advance cancer drug development
- share or distribute this information with the radiology community
- stimulate collaborative efforts to evaluate technically challenging treatment approaches
- provide expertise to help evaluate the role of imaging in clinical cancer care and guide its use



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The National Comprehensive Cancer Network (NCCN), a not-for-profit alliance of 21 of the world's leading cancer centers, is dedicated to improving the quality and effectiveness of care provided to patients with cancer. Through the leadership and expertise of clinical professionals at NCCN Member Institutions, NCCN develops resources that present valuable information to the numerous stakeholders in the health care delivery system. As the arbiter of high-quality cancer care, NCCN promotes the importance of continuous quality improvement and recognizes the significance of creating clinical practice guidelines appropriate for use by patients, clinicians, and other health care decision-makers. The primary goal of all NCCN initiatives is to improve the quality, effectiveness, and efficiency of oncology practice so patients can live better lives.

Your Best Resource in the Fight Against Cancer®

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**For more information on the NCCN SIRC,
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