# WONIX

Wisconsin Oncology Network of Imaging eXcellence

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Wisconsin Oncology Network of Imaging eXcellence (WONIX) University of Wisconsin Carbone Cancer Center, Madison, WI



# **WONIX and WON network**



of Imaging eXcellen



- Aspirus Regional Cancer Center, Wausau
- Aurora Cancer Care
- Aurora HealthCare Network
- Bellin Memorial Hospital, Green Bay
- Columbia-St. Mary's, Milwaukee
- Dean Clinic Heme/Onc
- Ferguson Cancer Center, Freeport, IL
- Fox Valley Heme/Onc
- Gundersen Lutheran, La Crosse
- Holy Family Cancer Center, Manitowoc
- Marshfield Clinic
- Medical College of Wisconsin, Milwaukee
- Mercy Health System, Janesville
- ProHealth Care, Waukesha and Oconomowoc
- St. Vincent Hospital, Green Bay
- UWCCC
- UWCCC Partners, Johnson Creek, Wisconsin Rapids
- Vucurevich Cancer Center, Rapid City SDIX

#### Wisconsin Oncology Network of Imaging Excellence (WONIX)



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### Scott Walker

GOVERNOR SCOTT WALKER ANNOUNCES INVESTMENT IN THE UW CARBONE CANCER CENTER (THURSDAY, FEBRUARY 14, 2013)

WHAT'S

HAPPENING

February 14, 2013 For Immediate Release

Governor Scott Walker Announces Investment in the UW Carbone Cancer Center

Madison—Today, Governor announced a \$3.75 million state taxpayer investment in the UW Carbone Cancer Center Investment to accelerate the development of and access to cutting-edge molecular imaging technology developed by the Center.

"Cancer is one of Wisconsin's deadliest health problems," said Governor Walker. "This investment will leverage investment in the private sector to help the Wisconsin Oncology Network of Imaging Excellence, which will provide better access to diagnostics and treatment in rural areas. I am hopeful by making targeted investments the state can partner with the private sector to ensure Wisconsin remains on the cutting edge of healthcare systems."

According to the Wisconsin Department of Health Services, in Wisconsin, 11,268 Wisconsinites were killed by cancer in 2010, more than one person every hour and nearly a quarter of all deaths in the state that year. A recent study found that the cost of cancer treatment in Wisconsin is expected to grow to \$4 billion by the end of 2015. According to the American Cancer Society, nearly 30,000 Wisconsinites were diagnosed with cancer in 2010 or 81 people every day.

Governor Walker's budget proposal supports the creation of the Wisconsin Oncology Network of Imaging Excellence, along with funding imaging research related equipment and expansion of the Wisconsin Oncology Network. State funding is contingent on DOA approval of a plan to obtain a fundraising match.

Total WONIX budget: \$8.6M

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#### WONIX



 Mission: To accelerate access to cutting-edge molecular imaging technology and improve image quality through the State of Wisconsin

#### Major components:

- Imaging core resources
  - <u>Quantitative imaging</u> Improved image quality
  - Informatics Improved data flow
  - <u>Data</u> Data warehouse for future data mining
  - Molecular imaging agents Access to advanced agents
- Imaging clinical trials



### **WONIX organizational structure**



Cancer Center NIVERSITY OF WISCONSII SCHOOL OF MEDICINE AND PUBLIC HEALTH

# Molecular imaging agents WG



- Goal: To develop molecular imaging agents and make them available to the WONIX sites
- Radiopharmaceutical production facility (RPF) expansion completed
  - Tests revealed issues with air filters
  - Remaining issues fixed
  - Opened on Feb 1, 2016
- RPF submitted documentation to NCI CIP to be qualified to participate in NCTN clinical trials (5 INDs)
  - One of the first two sites in the nation
  - This will enable us to conduct NCTN clinical trials through WONIX



## **Quantitative imaging WG**



- Goal: To establish "harmonized" quantitative imaging across the WONIX sites
- Automatic QA/QC workflow developed
- Scanner harmonization procedures developed and tested
- Site qualification/harmonization of WONIX sites:
  - Gundersen, La Crosse qualified
  - St. Vincent, Green Bay qualified
  - Other sites in the pipeline



### **Informatics WG**



- Goal: To enable automated workflows, data collection and integration, and processes that enable scalable clinical trials within WONIX
- XDS cross document sharing system (McKesson) undergoing installation at UW
- Imaging data workflow tested
- Genomic data workflow integration with imaging data workflow on the way
- Imaging/genomic/clinical data integration into WONIX database(s)

#### Data WG



- Goal: To develop common database platform and appropriate tools for data analysis and data mining
- Three-level WONIX database structure designed:
  - Big data (PACS, EHR)
  - Mid data (TCIA-like, TCGA-like, OnCore)
  - Small data (LabKey)
- Data workflow through databases tested:
  - Test cases
  - MITOS patient data
- Data management developed:
  - Data tracking (scoreboards)



#### WONIX WGs



#### **MOLECULAR IMAGING AGENTS**



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#### **QUANTITATIVE IMAGING**





- WNX001: MITOS (Molecular Markers to Individualize Treatment Options for Lung Cancer Patients) (in collaboration with WON)
- WNX002: Retrospective analysis of lung cancer patients (in collaboration with WON)
- WNX003: EAI141 Early Assessment of Treatment Response in AML using FLT PET/CT Imaging (in collaboration with ECOG-ACRIN)
- WNX004: EAI142 [<sup>18</sup>F] Fluoroestradiol (FES) PET as a Predictive Measure for Endocrine Therapy in Patients with Newly Diagnosed Metastatic Breaston Cancer (in collaboration with ECOG-ACRIN)

# WONIX future (WONIX 2.0)



- Increasing the number of WONIX sites (beyond WI)
- Merged efforts with the UWCCC Molecular Tumor Board (MTB)
  - Joint protocol
  - Joint database and umbrella database protocol
- Translational Research Imaging Exchange (TRIX)
  - One of the optional modules in the next UW CTSA renewal
- Canine Oncology Network of Imaging Excellence (CONIX)
  - RFA-CA-17-001: Canine Immunotherapy Trials and Correlative Studies (U01/U24)
- Collaborations with other clinical trial networks (in addition to WON and ECOG-ACRIN)
  - Big 10 network
  - PCCTC





# **QUESTIONS?**

