

# NCI Small Cell Lung Cancer Consortium

State of the state  
2018

Charles Rudin MD PhD



Memorial Sloan Kettering  
Cancer Center

# Goals of the Center

- Facilitation of data exchange and meetings among investigators
- Centralized database support for SCLC research
- Characterization of and access to relevant preclinical models

## Aim 1: Communication

Website

Monthly WebEX

Annual meeting: (NCI, IASLC, alternating years)

## Aim 2: Analytics

cBioPortal (omic data)

Vanderbilt CQS  
(clinical correlates)

## Aim 3: Models

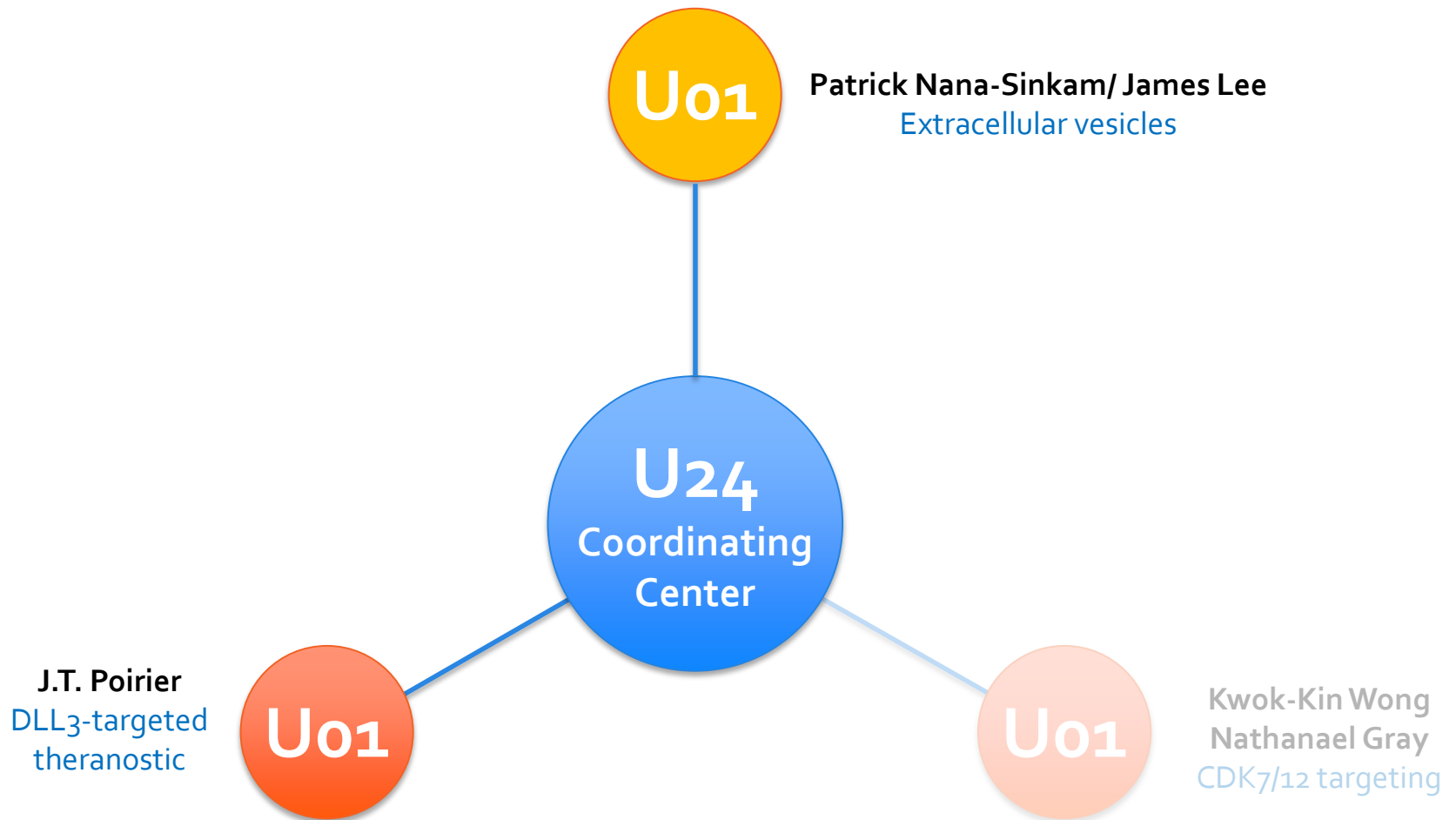
GEMMs

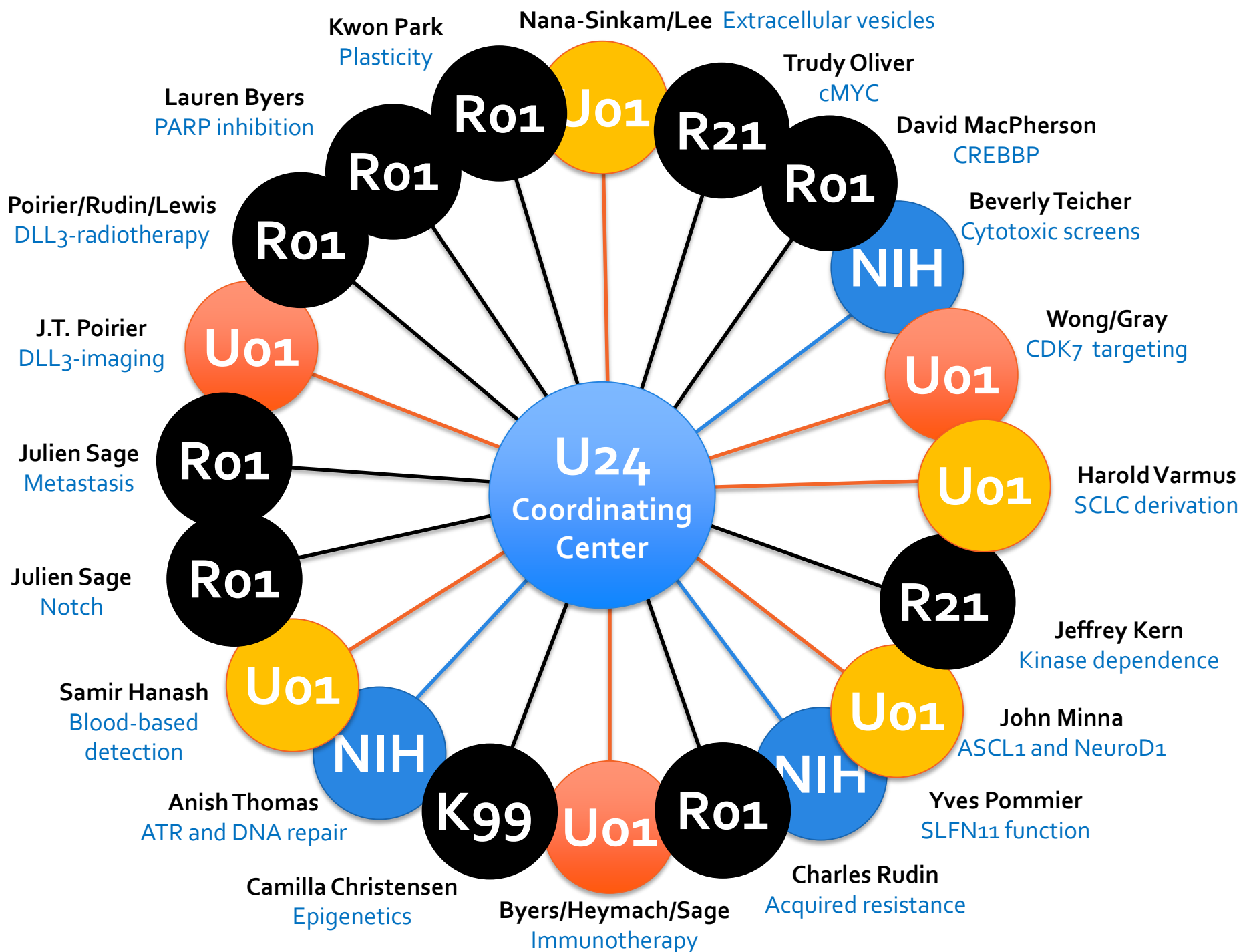
Cell lines

TMAs

PDX/CDX

# NCI SCLC “Consortium”





# Components of the U24 Coordinating Center

**UT Southwestern**  
Medical Center

**Cell line resources**  
Minna  
Gazdar

**NIH NATIONAL CANCER INSTITUTE**

**Coordination**  
Forry  
Szabo  
Ujhazy

**CASE WESTERN RESERVE UNIVERSITY** EST. 1826

**Tissue microarrays**  
Dowlati

**VANDERBILT UNIVERSITY**

**Clinical correlates database**  
Shyr  
Berry

**Memorial Sloan Kettering Cancer Center** **cBioPortal for Cancer Genomics**

<b>PDX models</b> Rudin Poirier	<b>Molecular profiling</b> Berger Taylor Schultz Shen
<b>GEMMs</b> Ventura Lowe	

**Mit** **MGH 1811 MASSACHUSETTS GENERAL HOSPITAL**

**GEMM models**  
Jacks

**PDX/CDX models**  
Farago

# Aim 1: Communication

## 1. Website

For Research Scientists / Research Programs / Extramural Collaborations

### NCI Small Cell Lung Cancer Consortium

The goals of this Coordinating Center include facilitating information exchange among investigators in the NCI Small Cell Lung Cancer (SCLC) Consortium, supporting data integration and data analysis, and serving as a central resource for characterization and distribution of model systems. By providing these resources, and by coordinating frequent data-sharing opportunities and leading annual face-to-face meetings among SCLC investigators, we believe this Center can substantially accelerate progress against this deadly disease.



MSK Thoracic Oncology Service Chief Charles Rudin leads the NCI Small Cell Lung Cancer Consortium.

## 2. Annual meeting

### SMALL CELL LUNG CANCER RESEARCH CONSORTIUM MEETING

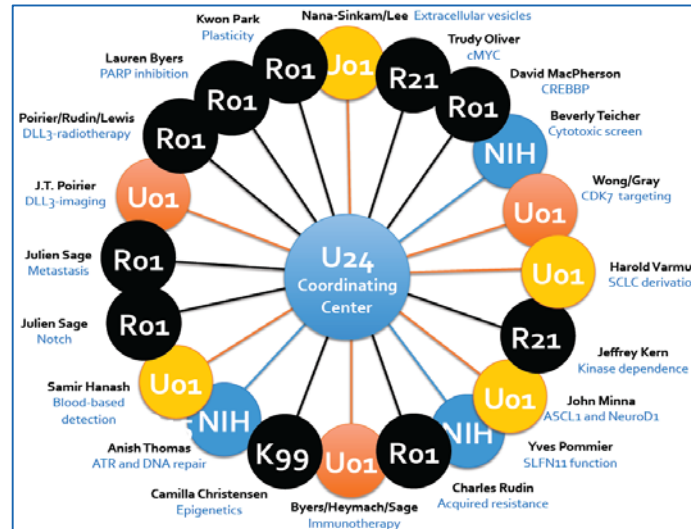
Meeting Agenda  
March 15 - 16, 2018  
NCI - Shady Grove Campus  
9609 Medical Center Drive  
Room TE 406/408/410

Thursday, March 15, 2018

**OPENING SESSION**

Welcome and Introductions	Suzanne Forry, Eva Szabo, Peter Ujhazi	9:00 - 9:35
Coordinating Center - Year 1	Charles Rudin	9:35 - 9:39
SCLC Consortium cBioPortal	Nikolaus Schultz	9:39 - 9:45
Vanderbilt COS	Yu Shyr	9:45 - 10:00
DISCUSSION		10:00 - 10:35

## 3. Monthly WebEx



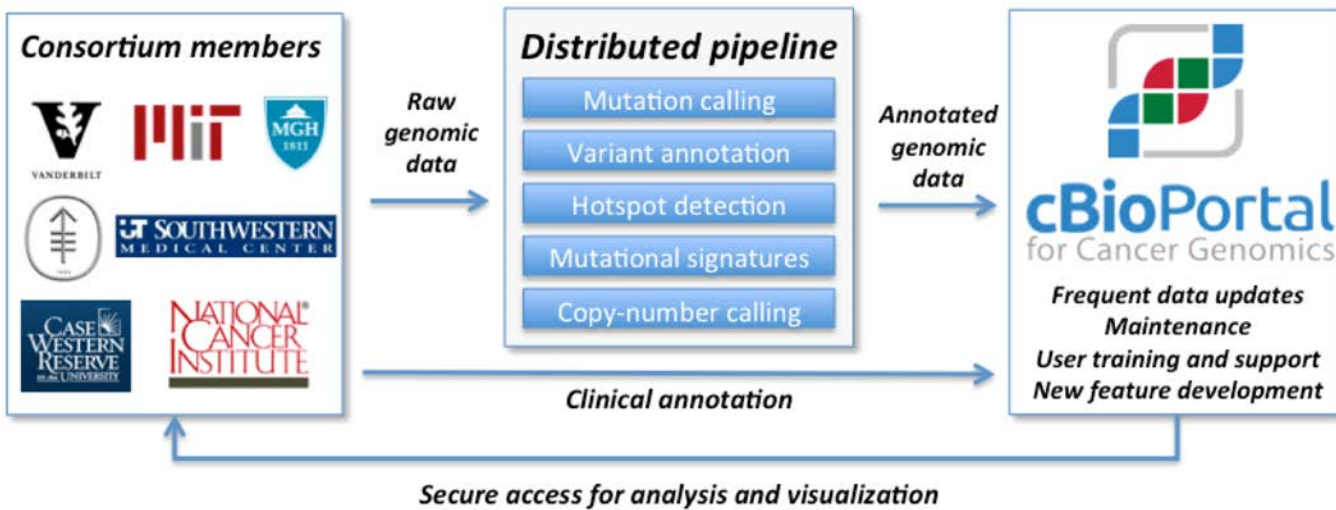
### Small Cell Lung Cancer Workshop

March 15-17, 2017 | New York

Memorial Sloan Kettering Cancer Center

[www.iaslc.org](http://www.iaslc.org) | [plu.hitsche@iaslc.org](mailto:plu.hitsche@iaslc.org)

# Aim 2: Analytics





















# Current SCLC resources in cBioPortal

- [www.cbioportal.org/sclc](http://www.cbioportal.org/sclc)

## Lung Neuroendocrine Tumor

### → SMALL CELL LUNG CANCER

<input type="checkbox"/>	MSK Clinical Sequencing Cohort of Small Cell Lung Cancer Cases (MS...	175 samples			
<input type="checkbox"/>	Paired chemosensitive and chemoresistant SCLC PDX (MSKCC, Canc...	20 samples			
<input type="checkbox"/>	Small Cell Lung Cancer (CLCGP, Nat Genet 2012)	29 samples			
<input type="checkbox"/>	Small Cell Lung Cancer (Johns Hopkins, Nat Genet 2012)	42 samples			
<input type="checkbox"/>	Small Cell Lung Cancer (U Cologne, Nature 2015)	110 samples			
<input type="checkbox"/>	Thoracic PDX - Rudin (CMO CR_lupdx [Subset])	27 samples			

- Coming soon –
  - WES data from MSKCC
  - CDX models from MGH
  - Cell line data from UTSW
  - TMA tumors from CWRU



# Aim 3: Models

- Cell line repository at UTSW
  - Over 105 SCLC lines
  - Mutational, expression, and proteome profiling
  - Comprehensive drug sensitivity screen (Teicher)
- PDX and CDX models at MSKCC and MGH (and elsewhere)
  - Rapidly emerging resource with CDX at MGH (Farago/Drabkin/Dyson)
  - Chemosensitive and chemoresistant pairs
  - Additional models (MDACC, U Manchester)
- GEMM models
  - Recent informative models from UTSW (Johnson), Utah (Oliver), and Stanford (Sage)
  - Multiple models being generated by others

# Where we might invest some resources/effort (among other areas)

- Improving human data collection/annotation/display
  - Incorporation of additional datasets – tumors and models
  - Consistent clinical annotation
  - Gene expression / Methylome / Proteome...
- Mouse model database
  - A GEMM working group
  - Annotation of existing/emerging models
  - A cBioPortal for GEMMs
    - Genomic/RNA/proteomic datasets
- Please, let's think about this over the next couple days