The mission of The Leukemia & Lymphoma Society (LLS) is to cure leukemia, lymphoma, Hodgkin’s disease and myeloma, and improve the quality of life of patients and their families.

We fund **RESEARCH** to advance lifesaving treatments.

We provide patients, survivors, caregivers, families and healthcare professionals with hope, guidance, **EDUCATION** and **SUPPORT**.

We drive **ADVOCACY** for policies that protect patient access to lifesaving treatment.

Approximately every **3 minutes** someone in the U.S. is diagnosed with blood cancer.

Nearly **1.4 million** people in the U.S. are living with or in remission from leukemia, lymphoma or myeloma.

About **30 percent** of blood cancer patients still do not survive five years after diagnosis.

About **40 percent** of all pediatric cancers are blood cancers.
LLS MISSION INVESTMENT IS SUPPORTED BY MULTIPLE REVENUE SOURCES

- Invested nearly $1.3 billion in research and development worldwide since founded in 1949
- Helped advance 52 of 60 FDA approved blood cancer drugs
- Supported >93,000 patients since inception
- Responded to 20,000 inquiries in 2019
LLS GLOBAL RESEARCH AND DEVELOPMENT FOCUS

Research and development programs and clinical trials using LLS resources

**Academic Grants**
~$50 Million/yr over past 20 years at over 80 institutions with >4,000 projects total

**PedAL**
Global precision medicine trial focused on pediatric relapsed leukemia

**Therapy Acceleration Program®**
~$10 Million/yr venture philanthropy initiative funding >70 portfolio projects since 2007

**Beat AML® Master Clinical Trial**
LLS Sponsored precision medicine trial
LLS THERAPY ACCELERATION PROGRAM (TAP)

Venture philanthropy funding to support novel therapies

Established in 2007

>$125 Million invested to date
  ▪ Biotech: >$90 Million
  ▪ Institutions: ~$35 Million
  ▪ >70 financings of companies and assets
  ▪ >20 assets currently in active development

3 FDA-Approved Therapies
  ▪ Vyxeos (AML)
  ▪ Yescarta (DLBCL, tFL, PMBCL)
  ▪ Elzonris (BPDCN)

ROI Focus:
  ▪ FDA Approvals
  ▪ Assets in clinical development
  ▪ Strategic transactions & financing for portfolio companies
  ▪ Financial ROI to LLS

www.LLS.org/therapy-acceleration-program

BEATING CANCER IS IN OUR BLOOD.
LLS TAP SCIENTIFIC & BUSINESS LEADERSHIP

Lore Gruenbaum, PhD
VP, TAP
- 20 years drug discovery & clinical development
- VP, Gotham Therapeutics; Exec Dir, Applied Biomath
- Biomarker Head, Virology, Roche; Group Leader, BI
- Yale postdoctoral work, principal investigator and collaborator on several SBIR grants

Lee Greenberger, PhD
SVP, Chief Scientific Officer
- 20 years big pharma and biotech
- Oversight responsibility for >$50 M annual research budget
- Advanced > 10 oncology therapeutics into the clinic
- Search & due diligence experience with big pharma

Javeed Froozan, MBA, BS
VP, Business Development
- 25 years biopharma and health technology value creation
- Sr. Dir, Emergent BioSolutions, Multiple start-ups/exits, 2 IPOs
- Business lead on EBS-Trubion M&A transaction. Alliance Manager for Pfizer relationship
- Strategic Investments, M&A, Business Development, Asset Management, and Economic Development

Blaine Robinson, PhD
Executive Director, TAP
- 15 years research & clinical development in blood cancer
- Search & Diligence on 100+ projects
- Scientific lead for over 20 TAP projects including Constellation, Kymera, Ryvu & most recently Abintus, Caribou & Immune-Onc
- Pediatric leukemia researcher, Children’s Hospital of Philadelphia

Jun Xu, PhD
Executive Director – TAP Lead
- 20 years oncology/immunology drug discovery/development
- Search & Diligence on 100+ projects
- Scientific lead for over 20 TAP projects including multiple high impact ones, such as Stemline, Kite, argenX, Forty Seven & most recently Carisma

Therapy Acceleration Program Committee: https://www.lls.org/therapy-acceleration-program/oversight
TAP GOALS & INVESTMENT STRATEGY
Accelerate innovative blood cancer therapies and generate ROI for LLS mission

Focus on high-value assets:
- Existing and emerging populations with high unmet needs
- Gaps in current and emerging treatment landscape
- Innovative science, first-in-class assets
- First-in-heme/onc and registration trials
- Strong intellectual property, management, and finances

Average annual number

NEW OPPORTUNITIES: 80-100
LLS STAFF EVALUATION: 40-50
CONFIDENTIAL PRESENTATION: 20-30
EXTERNAL EXPERT CONSULTATION: 5-10
TAP COMMITTEE REVIEW: 2-4
2 PATHS TO CO-INVEST WITH INVESTORS AND VENTURE PHILANTHROPIES

**Strategic**
- Range of Investment: $2 Million to $10 Million
- Presentation to TAP Committee
- Typically, 3-6 months to reach TAP Committee

**Opportunistic**
- Target Investment: $500,000
- LLS TAP team briefs TAP Committee Chair
- Transaction completion in 1-3 months
Key features of LLS TAP Investment Side Letter

- Cites LLS Mission focus and company’s focus and assets in blood cancer
- Investment amount on same terms and conditions as other investors, and use of proceeds (less detail for public companies)
- Exclusion of fees on LLS proceeds to investment banks and other intermediaries (via waiver, decreased total load, or refund to company)
- Information & observer rights (private firms)
- Research Advisory Committee (RAC) structure for recurring meetings between TAP team and company to discuss corporate and program progress – Company retains control of program
- Company participation in LLS events, publication review, and evaluate providing research materials to PI’s.

Side letter captures the mission-driven collaborative nature of the relationship between LLS TAP and the partner companies
TAP VALUE ADD TO BIOTECH COMPANIES

TAP-funded companies benefit from LLS blood cancer insight

- Deep knowledge of indications and rapidly changing SoC
- Unique scientific, clinical, and drug development expertise
- Patient access services to enable understanding of patient needs
- Immediate access to extensive KOL network
- Pharmaceutical, biotech, and research institution partner connections
- Regulatory insight through LLS initiatives (Beat AML Master Clinical Trial®)

TAP record of success provides scientific & investment credibility, and visibility enabling companies to raise additional funds.
TAP PORTFOLIO THERAPEUTIC PLATFORMS FUNDED (2007-2021)

Portfolio is aligned with strong industry focus on Targeted Therapy and reflects growing interest in Cell and IO Therapies in blood cancer

71 Projects

- Targeted Therapy
- Novel IO/antibody
- Cell Therapy
- Epigenetic
- Fusion
- Vaccine
- ADC
- Novel Chemo
- Bispecific
- Protein Degrader
- RNA

>$125 Million
TAP PORTFOLIO INVESTMENTS IN ACUTE MYELOID LEUKEMIA (AML)

TAP team understands & successfully invests in complex therapeutic areas

**High Unmet Medical Need**
- 72,000 newly diagnosed in 8 major markets (2019)
- >10,000 deaths per year in US
- Complex, heterogeneous disease
- Ineffective long-term disease control with current therapies
- Elderly patients not fit for chemo
- Growing use of targeted therapies and combinations

**Significant Market Opportunity**
- Global AML market $1.4 Billion (2019)
- CAGR 13.6% (projected to 2029)

Overview of the development pipeline 2020 @GlobalData

Legend
- = Phase 3
- = Phase 2

Chemotherapy
Vyxeos*

Cell Therapy
3 assets

ADC/Fusion
Elzonris*

Antibody
2 assets

Targeted Therapy
12 assets

*FDA approved

High Unmet Medical Need

- 72,000 newly diagnosed in 8 major markets (2019)
- >10,000 deaths per year in US
- Complex, heterogeneous disease
- Ineffective long-term disease control with current therapies
- Elderly patients not fit for chemo
- Growing use of targeted therapies and combinations

Significant Market Opportunity

- Global AML market $1.4 Billion (2019)
- CAGR 13.6% (projected to 2029)
## TAP PORTFOLIO ASSETS IN DEVELOPMENT

<table>
<thead>
<tr>
<th>Therapy</th>
<th>Target/Modality</th>
<th>Indications</th>
<th>Preclinical</th>
<th>Phase 1</th>
<th>Phase 2</th>
<th>Phase 2 Reg / Phase 3</th>
<th>FDA status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Magrolimab + Azacitidine</td>
<td>CD47 antibody, CD30/CD16A bispecific engager</td>
<td>MDS, PTCL</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AFM13</td>
<td>CD47 antibody</td>
<td>PTCL</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pelabresib + Ruxolitinib</td>
<td>BET, small molecule</td>
<td>MPN</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Duvelisib</td>
<td>PI3Kδ/y, small molecule</td>
<td>PTCL</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Magrolimab + Ruxolitinib</td>
<td>CD47 antibody</td>
<td>DLBCL</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cusatuzumab + Azacitidine</td>
<td>CD70 antibody</td>
<td>AML</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>KO-539</td>
<td>Menin, small molecule</td>
<td>AML</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>STRO-001</td>
<td>CD74 antibody drug conjugate</td>
<td>NHL/MM</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Mavorixafor + Ibrutinib</td>
<td>CXCR4, small molecule</td>
<td>Waldenström, macroglobulinemia</td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RVU120</td>
<td>CDK8/19, small molecule</td>
<td>AML/MDS</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>PVX-410 + ACY-241 +/- Len</td>
<td>XBP1/CD138/CS1 vaccine</td>
<td>Smoldering myeloma</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>NEXI-001</td>
<td>T cell therapy</td>
<td>AML, MM</td>
<td></td>
<td></td>
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<tr>
<td>NEXI-002</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>BTX-AS1</td>
<td>CK1-e/CDK7/CDK9 small molecule</td>
<td>AML/MDS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IO-202</td>
<td>LILRB4 antibody</td>
<td>AML/CML</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>CB-910</td>
<td>CD19/PD1 KO allogeneic CAR</td>
<td>NHL</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>KT-413</td>
<td>IRAKIMID degrader</td>
<td>DLBCL</td>
<td></td>
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<tr>
<td>KT-333</td>
<td>STAT3 degrader</td>
<td>Hemm malignancies</td>
<td></td>
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<tr>
<td>IMT-009</td>
<td>CD161 antibody</td>
<td>NHL</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TBD</td>
<td>in vivo CAR</td>
<td>TBD</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TBD</td>
<td>CAR macrophage</td>
<td>TBD</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1: Acquired by Gilead  
2: Acquired by Morphosys  
3: Duvelisib acquired by Secura Bio  
4: Licensed from University of Michigan
## TAP FUNDED ASSETS CREATE VALUE

TAP portfolio partners have had successful M&A, collaboration and licensing transactions

<table>
<thead>
<tr>
<th>Kite Pharma</th>
<th>Gilead</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>FORTY SEVEN</strong></td>
<td>morphosys</td>
</tr>
<tr>
<td>Constellation Pharmaceuticals</td>
<td>Jazz Pharmaceuticals</td>
</tr>
<tr>
<td>Celator Pharmaceuticals</td>
<td>Menarini Group</td>
</tr>
<tr>
<td>Stemline</td>
<td>Sanofi</td>
</tr>
<tr>
<td>Kiadis Pharma</td>
<td>Celgene</td>
</tr>
<tr>
<td>Acetion</td>
<td>Epizyme</td>
</tr>
<tr>
<td>Epizyme</td>
<td>Celgene</td>
</tr>
<tr>
<td>AVILA</td>
<td>WindMIL Therapeutics</td>
</tr>
<tr>
<td>Johns Hopkins Medicine</td>
<td>Kura Oncology</td>
</tr>
</tbody>
</table>

**Transactions**

>$20 Billion
## TAP PORTFOLIO COMPANY WITH ASSETS IN ACTIVE BLOOD CANCER DEVELOPMENT

### SIGNIFICANT EQUITY FINANCING RAISED CONCURRENT WITH OR POST-LLS TAP FUNDING

<table>
<thead>
<tr>
<th>Equity since TAP Funding*</th>
<th>TAP Portfolio Company</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt;$1 Billion</td>
<td>argenx Epizyme</td>
</tr>
<tr>
<td>&gt;$500 Million</td>
<td>Constellation(^1)</td>
</tr>
<tr>
<td></td>
<td>Kura(^2)</td>
</tr>
<tr>
<td></td>
<td>Kymera(^2)</td>
</tr>
<tr>
<td>$250-$500 Million</td>
<td>Caribou(^2)</td>
</tr>
<tr>
<td></td>
<td>Curis</td>
</tr>
<tr>
<td></td>
<td>Forty Seven(^3)</td>
</tr>
<tr>
<td></td>
<td>Sutro</td>
</tr>
<tr>
<td>$100-$250 Million</td>
<td>Affimed</td>
</tr>
<tr>
<td></td>
<td>BioTheryx(^2)</td>
</tr>
<tr>
<td></td>
<td>Neximmune(^2)</td>
</tr>
<tr>
<td></td>
<td>X4(^2)</td>
</tr>
<tr>
<td>$50-$100 Million</td>
<td>Carisma(^2)</td>
</tr>
<tr>
<td></td>
<td>Immune-Onc(^2)</td>
</tr>
<tr>
<td></td>
<td>Immunitas(^2)</td>
</tr>
<tr>
<td></td>
<td>Ryvu</td>
</tr>
<tr>
<td></td>
<td>WindMIL(^2)</td>
</tr>
<tr>
<td>&lt;$50 Million</td>
<td>Abintus(^2)</td>
</tr>
<tr>
<td></td>
<td>Indaptus(^2)</td>
</tr>
<tr>
<td></td>
<td>OncoPep(^2)</td>
</tr>
</tbody>
</table>

Table includes assets without a regulatory approval. *GlobalData as of August 31, 2021
1: LLS asset funding (07/2021 M&A by MorphoSys); 2: LLS equity; 3: LLS equity participation plus asset funding (05/2020 M&A by Gilead)
KEY POINTS

LLS TAP has established record of success
▪ Targeting unmet medical needs
▪ Leading to FDA approvals of life changing therapeutics
▪ Creating value for patients, companies and ROI for the LLS mission

LLS would like to expand the reach & impact of the TAP program
▪ Leverage its unique expertise in novel collaborations
▪ Attract more companies and investors to blood cancer indications
▪ Expand TAP capacity to support the most promising assets

For more information, contact:
Lore Gruenbaum, PhD 914.821.8361 | Lore.Gruenbaum@LLS.org
Javeed Froozan, MBA 914.821.8817 | Javeed.Froozan@LLS.org
Vyxeos® is the first FDA-approved treatment for two types of poor-prognosis AML (2017)

ACQUIRED BY JAZZ PHARMA FOR $1.5 BILLION IN 2016

LLS TAP PROVIDED:

$9.15 MILLION ASSET FUNDING

ROI: $25.3 MILLION

Five-year final results of a phase 3 study of CPX-351 versus 7+3 in older adults with newly diagnosed high-risk/secondary AML

J. Lancet et al., ASCO 2020
TAP SUCCESS: CD19 CHIMERIC ANTIGEN RECEPTOR (CAR) T-CELL THERAPY

Yescarta® is the first FDA-approved CAR-T Therapy in NHL (2017)
LLS has invested > $80 M in Cellular Immunotherapy since 1998

ACQUIRED BY GILEAD FOR $11.9 BILLION IN 2017

LLS TAP PROVIDED:
$2.5 MILLION ASSET FUNDING
ROI: $6.25 MILLION

Long-term safety and activity of axicabtagene ciloleucel in refractory large B-cell lymphoma (ZUMA-1): a single-arm, multicenter, Ph 1-2 trial

Locke et al. 2019. Lancet Oncology
Treatment outcomes of 29 patients with blastic plasmacytoid dendritic cell neoplasm (BPDCN) who received first-line treatment with tagraxofusp: Probability of overall survival

Pemmaraju et al., 2019. NEM
TAP SUCCESS: MAGROLIMAB (ANTI-CD47 ANTIBODY)
Magrolimab + Azacitidine induces high response rates in MDS and AML
Initiation of registration-enabling studies in 2020

ACQUIRED BY GILEAD FOR $4.9 BILLION IN 2020

LLS TAP PROVIDED:

$4.175 MILLION ASSET FUNDING
$3 MILLION EQUITY INVESTMENT

ROI: >$40 MILLION

---

### Best Overall Response

<table>
<thead>
<tr>
<th></th>
<th>1L MDS</th>
<th>1L AML</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>O</strong>R<strong>R</strong></td>
<td>30 (91%)</td>
<td>16 (64%)</td>
</tr>
<tr>
<td>CR</td>
<td>14 (42%)</td>
<td>10 (40%)</td>
</tr>
<tr>
<td>CRI</td>
<td>NA</td>
<td>4 (16%)</td>
</tr>
<tr>
<td>PR</td>
<td>1 (3%)</td>
<td>1 (4%)</td>
</tr>
<tr>
<td>MLFS/marrow CR</td>
<td>8 (24%)</td>
<td>1 (4%)</td>
</tr>
<tr>
<td>Hematologic improvement (HI)</td>
<td>7 (21%)</td>
<td>NA</td>
</tr>
<tr>
<td>SD</td>
<td>3 (9%)</td>
<td>8 (32%)</td>
</tr>
<tr>
<td>PD</td>
<td>0</td>
<td>1 (4%)</td>
</tr>
</tbody>
</table>

Responding assessments per 2006 IWG-MDS criteria and 2017 IWG-RBM criteria. Patients were not included in the Final Overall treatment response assessment if they were on therapy and were not evaluable for first response assessment, except for 1 MDS patient not evaluable (withdrawal of consent) and 1 AML patient (DIE, D killed withdraw). 

- Magrolimab + AZA induces a 91% ORR (42% CR) in MDS and 64% ORR (56% CR/CRI) in AML
- Responses deepened over time with a 56% 6-month CR rate in MDS patients (assessed in all patients 6 months after initial treatment)
- Median time to response is 1.9 months, more rapid than AZA alone
- Magrolimab + AZA efficacy compares favorably to AZA monotherapy (CR rate 6-17%)3,4


---

Magrolimab blocks the ‘don’t eat me’ signal on tumor cells
TAP SUCCESS: KO-539 (MENIN INHIBITOR)
First-in-class inhibitor of the menin-MLL interaction in Ph1 trial for patients with relapsed/refractory AML

KO-539 Demonstrates Encouraging Early Clinical Activity

Grants initially and then TAP supported preclinical development (including chemistry) of menin-MLL interaction inhibitors by Jolanta Grembecka at University of Michigan and licensing of assets to Kura Oncology in Dec 2014

Phase 1/2a trial for R/R AML with MLL fusions/NPM1 mutations
- First patient dosed in Sept 2019
- Initiated expansion cohorts in July 2021

PRECLINICAL COMPOUNDS RELATED TO KO-539 LICENSED TO KURA ONCOLOGY IN 2015

LLS TAP PROVIDED:
$6.31 MILLION ASSET FUNDING TO U MICHIGAN

ROI: EQUITY: 26,000+ SHARES + $26,000+ CASH TO DATE

American Society of Hematology
Wang et al. ASH 2020 #115

Data as of 02 November 2020
**TAP SUCCESS: PELABRESIB (BET INHIBITOR)**

Pelabrelib + Ruxolitinib induces high spleen volume response rates in JAK-naive myelofibrosis

Initiation of registration-enabling study in 2020

First Novel Mechanism Beyond JAK Inhibitors to Demonstrate POC in 1L MF

- Robust response rate to date in trial of > 60 1L patients
- Strong activity observed as a monotherapy and add on to ruxolitinib 2L+ patients
- Translational data and improvement in anemia supports disease-modifying potential
- Pelabresib has been generally well-tolerated to date
- Phase 3 trial (MANIFEST-2) under way

---

**ACQUIRED BY MORPHOSYS FOR $1.7 BILLION IN 2021**

**LLS TAP PROVIDED:**

$7.35 MILLION ASSET FUNDING

**ROI: $7.35 MILLION TO DATE**

---

**24-Week SVR35 Rate**

<table>
<thead>
<tr>
<th>1L setting (Am 3)</th>
<th>Upfront combo with ruxolitinib</th>
<th>COMFORT-1*</th>
<th>COMFORT-2**</th>
<th>SIMPLIFY-1***</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>67% (42/63)</td>
<td>41.9%</td>
<td>32%</td>
<td>29%</td>
</tr>
</tbody>
</table>

SVR35 response = ≥35% spleen volume reduction (Measured at 24 Weeks)


---

**BEATING CANCER IS IN OUR BLOOD.**

---

**PAGE 23**
THERAPY ACCELERATION PROGRAM COMMITTEE

Casey Cunningham, MD (Chair) +
Santé Ventures

Stephen Ansell, MD, PhD
Mayo Clinic Rochester

Madhav Dhodapkar, MBBS
Emory University

Courtney DiNardo, MD
The University of Texas MD Anderson Cancer Center

Giulio Draetta, MD, PhD
The University of Texas MD Anderson Cancer Center

Christopher Flowers, MD +
The University of Texas MD Anderson Cancer Center

Patrick Fortune, PhD, MBA
Partners Heathcare Systems

Tapan Kadia, MD
The University of Texas MD Anderson Cancer Center

Laura Kaufman, PhD, DABT
Private Consultant

Ronald Levy, MD
Stanford University School of Medicine

Fred Locke, MD
Moffitt Cancer Center

Ruben Mesa, MD +
UT Health San Antonio

Vern Norviel, JD
Wilson Sonsini Goodrich & Rosati

Daniel Pollyea, MD
University of Colorado

Jim Reddoch, PhD
Royalty Pharma

Robert Rosen, JD +
Grewhawke Capital Advisors

Steven Rosen, MD
City of Hope

Robert Spiegel, MD
Spiegel Consulting LLC

David Weinstock, MD
Dana-Farber Cancer Institute

+ National Board Member
THANK YOU!