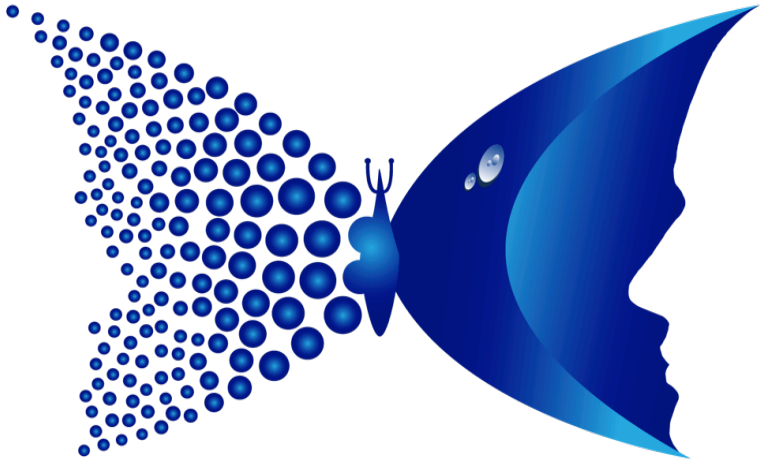

# NEMUCORE

Medical Innovations, Inc.

One Hollis St, Suite 232

Wellesley, MA 02482

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## Nemucore's History

*Majority of cancer patients have disease with no actionable genetic alterations.*

*Nemucore was founded in 2008 to create Precision Medicines for these patients.*

## Nemucore's Vision

*Each individual's cancer holds the knowledge to its own elimination.*

*Nemucore unlocks this knowledge.*

## Nemucore's Mission

*License, Develop and Commercialize Best-in-Class*

*Precision Medicines for Highly Lethal Cancers*

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# Company Highlights

- In-licensing technology integration driven business model – mitigates R &D risk
- Option on global commercial rights to NMI-900 and *companion diagnostic
- Focused on “Precision Medicine” development of NMI-900, leveraging significant big pharma investments
- NMI-900 and companion diagnostic address multiple cancer indications
  - Acute Myeloid Leukemia (AML)
  - Myelodysplastic syndromes (MDS)
  - Breast cancer
  - Non-small cell lung cancer
  - Ovarian cancer
- Evidence of clinical activity and safety data NMI-900 Phase 1 trial
- Potential for “Fast-track Eligible” clinical trial data over the next 18-36 months

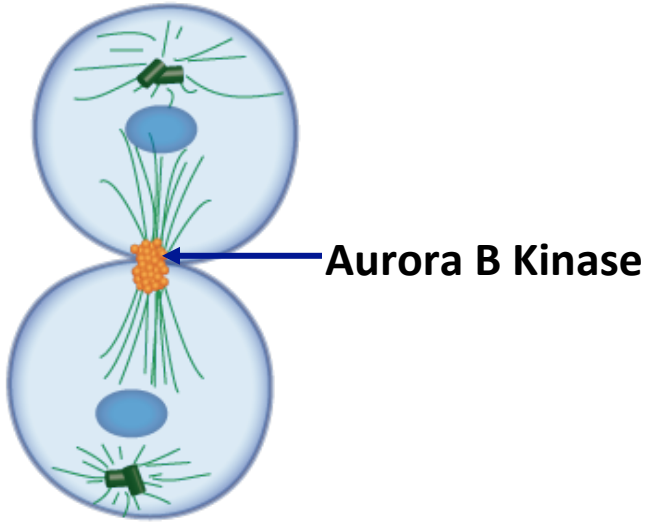


* Companion Diagnostic option term extension being negotiated to match the NMI-900 term

# NMI-900: Inhibits Aurora B Kinase Disrupting Cell Division



*Dividing Cancer Cell*




| NMI-900 Best-in-Class Binding to Aurora B Kinase Compared to Other Aurora B Kinase Inhibitors | | | |
|---|---|---|---|
| NMI-900 | Competitor A | Competitor B | Competitor C |
| 8 to 24 hours | < 0.5 hour | < 0.25 hour | < 2.6 hour |

- Strong NMI-900 binding leads to sustained Aurora B Kinase inhibition
- Stops cancer cells from dividing, resulting in cell death
- Potent, reversible competitive inhibitor of Aurora B Kinase
- Synergistic with *chemotherapeutics, targeted and immuno-therapies*

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# NMI-900: Phase 1 Clinical Trial Summary



- Phase 1 trial demonstrated 61% clinical activity, the highest rate among Aurora Kinase Inhibitors
  - Patient population – heavily pre-treated solid tumors
  - Administered one-hour IV infusion M-F every three weeks
  - One patient had partial response and 21 patients had stable disease
  - Study run by leading cancer centers in the United Kingdom
- Safe and well tolerated in 36 patients
  - Main 3/4 Adverse Event (AE) neutropenia and anemia
  - AEs were reversible
- Classical trial design, performed with *No* patient selection

*Note: See Appendix for additional information.*

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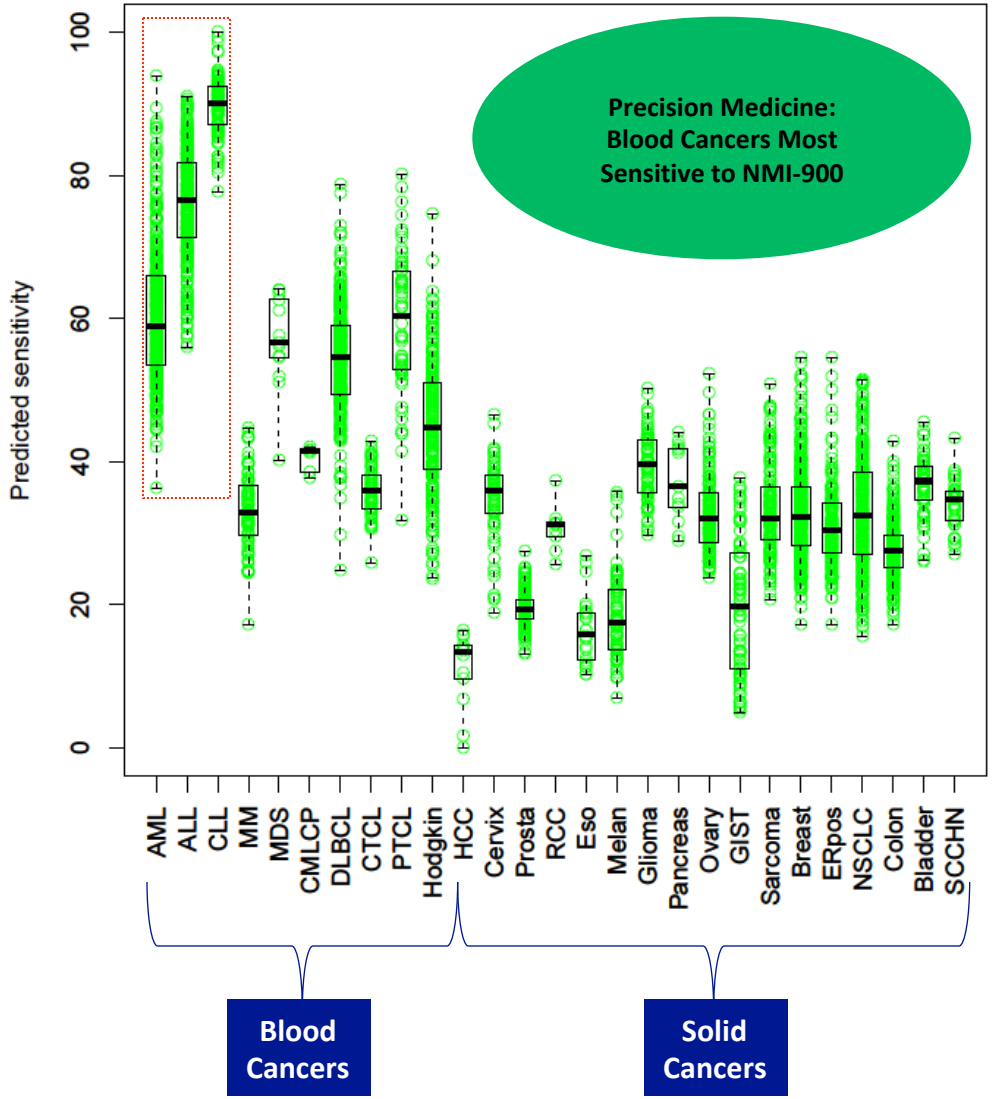
# NMI-900: Novel Companion Diagnostic Highlights

- Holistic approach to determining sensitivity to NMI-900
- Measures multiple biomarkers responsible for NMI-900 *sensitivity* and *resistance*
- Uses "Systems Biology" algorithm to calculate an NMI-900 Drug Response Predictor (DRP™) score for an individual's cancer
- Independent of mutation status
- Suitable for screening all cancer indications
- Performed on a Affymetrix chip in a clinic ready CLIA-setting
- Enables precision medicine clinical development program

# NMI-900 Dx: Enabling Precision Guided Trials
## Stacking the Deck in One's Favor






- Over 5,000 cancer patients have been screened with the NMI-900 Dx
- Each ○ represents a single patient
- Results segregated into discrete cancer indications
- "Blood Cancers" show a high degree of sensitivity to NMI-900 (example in red box)
- Solid tumors show promising potential for combination therapy with NMI-900

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# Working with Clinical Leaders

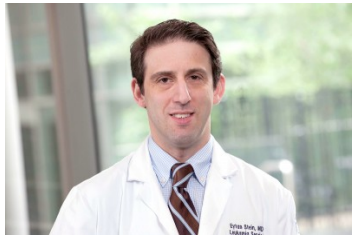
MOFFITT CANCER CENTER

Dr. Alan List

Dr. David Sallman

Memorial Sloan-Kettering Cancer Center
*The Best Cancer Care. Anywhere.*

Dr. Ross Levine



Dr. Eytan Stein

- Phase 1b/2 clinical development of NMI-900 in AML and High Risk(HR) MDS
  - Principal Investigators at Moffitt and Memorial Sloan-Kettering Cancer Centers
- Expansion of Phase 2 will include Principle Investigators from
  - Massachusetts General Hospital** and Massey Cancer Centers

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# Summary AML / HR-MDS Clinical Trial Plan

** In collaboration with Moffitt and Memorial Sloan-Kettering Cancer Center **

## Phase 1b / 2 Trial

**Study Highlights:**

- 2 arm trial
- Patient population: Patients with recurrent disease or those unsuitable for standard therapy
- Phase 1 Endpoints: Safety & Tolerability
- Phase 2a Endpoint: Efficacy
  - AML response criteria
  - International Working Group Criteria
- Analyze patient biopsies for NMI-900 DRP™ signature
- Number of patients per Arm: ~ 20
- Total Trial budget: $4M-$5.5M

## Arm 1

- NMI-900 IV weekly
- Dose escalation: 12 patients
- Expansion arm total: 20+ patients

## Arm 2

- NMI-900 IV twice weekly
- Dose escalation: 12 patients
- Expansion arm total: 20+ patients

**Apply for Fast Track, Breakthrough Therapy and Orphan Drug Designations**

# Clinical Development Plan



**Year 1**

- Exercise options on NMI-900 and Diagnostic
- AML/HR-MDS Trial initiation – IND, clinical materials and diagnostic
- Initiate Phase 1b trial in AML/HR-MDS
  - Moffitt & MSKCC
  - Physician Investigators: Drs. David Sallman (Moffitt) & Eytan Stein (MSKCC)
  - Safety, Schedule, Efficacy and Sensitivity/ Predictive power of the diagnostic
- Apply for Orphan Designation in AML and/or MDS
- MDS-CMML Trial initiation – IND, clinical materials and diagnostic

**Year 2**

- Manufacture second batch of NMI-900
- Open Phase 2 of AML/HR-MDS trial
  - Efficacy and Sensitivity/Predictive power of the diagnostic
- Interim analysis of AML/MDS data
- Open Combination MDS – CMML trial
  - Moffitt
  - Physician Investigators: Drs. Eric Padron and David Sallman
  - Safety, Schedule, Efficacy and Sensitivity/Predictive power of the diagnostic
- Preclinical Confirm Solid Tumor Synthetic Lethal Combinations MGHCC

**Year 3**

- Top line analysis of Phase 2 AML/ MDS data
- Data warranting, apply for Fast Track approval in AML and/or HR-MDS
- Open Phase 3 AML and/or HR-MDS
- Initiate Phase 1b clinical trial in Ovarian/Breast Cancer/Lung
  - Combination trial
  - Safety, Schedule, Efficacy and Sensitivity/Predictive power of the diagnostic
- Apply for Orphan Designation in select solid tumor indications

# Strategy: Uniquely Position NMI-900 for Commercial Success



**Strategic Summary**

- Pursue FDA approval in indications that NMI-900 can be utilized as a single agent
- Work with Key Opinion Leaders to identify solid tumor indications where combination with NMI-900 lead to successful FDA approval

**NMI-900 and AML/ high risk (HR)-MDS patients**

- NMI-900's unique activity and our biomarker analysis indicate NMI-900 could be very effective in AML and high risk-MDS patients. Plans are to have clinical data to support a fast-track designation in 24-30 months.
- NMI-900 AML/HR-MDS trials will be conducted at Moffitt and Memorial Sloan-Kettering Cancer Centers with phase 2 expansion sites to include MGH, Massey and Fox Chase Cancer Centers.

**Milestones Achieved**

- Recruited top oncologist to perform the designed clinical trials
- Secured a diagnostic partner for the performance of the NMI-900 DRP™ companion diagnostic
- Novella Clinical – A Quintiles Company selected as CRO partner to oversee the trial execution
- Sigma-Aldrich, world-class manufacturing partner to create future batches of NMI-900

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# Strategy: Uniquely Position NMI-900 for Commercial Success



- **Example exit:** Celator Pharmaceuticals reformulation of standard of care therapies achieved data superior to standard of care (47.7% vs. 33.3%, respectively). Two months later Jazz Pharmaceuticals purchased Celator for $1.5B. Four months prior to the acquisition, Celator was trading at ~ $28M in market capitalization.

- **Example *value created* with companion diagnostic:** On June 28, 2016 Tesaro announced Niraparib's Phase III NOVO Trial showed significant progression free survival in a "stratified" ovarian cancer patient population. Shareholders gained $2.6B in market capitalization upon the announcement.

- **Example *value lost* because no companion diagnostic:** On August 28, 2016 Bristol-Myers Squibb announced the Opvido™ Checkmate-026 Trial failed to achieve its primary endpoint in a "broad" population of lung cancer patients. Shareholders lost $2.2B in market capitalization upon the announcement.

- **Example fast-track:** Novartis won approval for Midostaurin, the first targeted therapy for AML patients who contain a FLT-3 mutation within 18 months of a fast-track designation.

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# Management Team

**Timothy P. Coleman, PhD, MBA**
*Chairman of the Board, Founder*
*President & Chief Executive Officer*

- Career focus on multidrug resistant (MDR) cancer therapy development
- More than 15 years of industry, entrepreneurial and leadership experience
- Former Manager in the Healthcare Advisory Practice at PwC
- Founder and former CEO of BioCache Pharmaceuticals, Inc.

**William "Sandy" White, MBA***
*Chief Operating Officer and*
*Chief Business Officer*

- More than 30 years of pharmaceutical industry experience including senior management roles at Wyeth and Monsanto
- More than 10 years of C-Level experience in the creation and development of start-up companies

**Daniel Geffken, MBA***
*Interim Chief Financial Officer*

- More than 20 years experience in life sciences
- Raised more than $1B in equity and debt

**Barbara Davis, VMD, PhD, DACVP***
*Chief Scientific Officer*

- Senior-level pharmaceutical experience at AstraZeneca and Millennium
- Chief of NIH Laboratory of Women's Health
- Extensive oncology, toxicology and pathology experience

**David Williams, MS***
*Senior Vice President, Operations*

- More than 25 years of experience in cGMP manufacturing
- Experience at Eli Lilly, Monsanto, Croptech, Chlorogen, and Integrated Protein Technologies

**Allison Morse MSN, SCM**
*Director of Clinical Affairs*

- More than 15 years of experience caring for woman with multidrug resistant cancers
- Established the Division of Gynecologic Oncology across a multi-hospital network in Eastern Massachusetts

*Today Nemucore is virtually organized with the management team participating when their expertise is required. Compensated in equity; cash compensation upon raise.

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# Board of Directors

Timothy P. Coleman, PhD, MBA
*Chairman of the Board, Founder*
*President & Chief Executive Officer*

- Career focus on multidrug resistant (MDR) cancer therapy development
- More than 15 years of industry, entrepreneurial and leadership experience
- Former Manager in the Healthcare Advisory Practice at PwC
- Founder and former CEO of BioCache Pharmaceuticals, Inc.

Douglas G. Bailey, SB, SM, ME, MBA
*Director, Chairman of the Compensation Committee*

- More than 35 years of executive leadership and board experience
- President, CEO and Founder of American Bailey Corporation
- Former Executive Chairman, President and CEO of Fuel Tech, Inc.
- Former Director and Compensation Committee Chair, Endocyte, Inc.

Bryan A. Costantino, MBA, MSPA
*Lead Director, Chairman of the Audit Committee*

- Partner at PwC for more than 25 years
- Co-Founder of a billion-dollar healthcare advisory practice

James B. Farinholt, Jr., BS
*Director, Chairman of the Nominating and Governance Committee*

- Extensive career in private and public investment and finance sectors
- Founding Partner Tall Oaks Capital Partners; Initiated/oversaw start-ups
- Former Assistant to the President for Economic Development of Virginia Commonwealth University

Michael V. Seiden, MD, PhD
*Director*
*Lead Clinical Advisor*

- More than 20 years of experience as a practicing oncologist
- CMO of McKesson Specialty Health and The US Oncology Network
- Former CEO and President of Fox Chase Cancer Center

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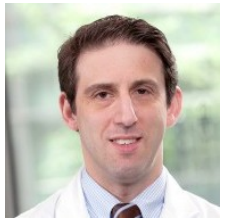
# Clinical Advisors

**Michael V. Seiden**
**MD, PhD**

- Chief Medical Officer of McKesson Specialty Health and President The US Oncology Network
- Former CEO and President of Fox Chase Cancer Center

**David Sallman**
**MD**

- Clinical instructor in the Dept. of Malignant Hematology
- Specializes in the development of novel, targeted therapeutic strategies for patients with MDS and AML



**Eytan M. Stein**
**MD**

- Hematology-oncology physician specializing in Leukemias, myelodysplastic syndromes, and myeloproliferative neoplasms
- Active clinical researcher developing new approaches to treating AML

**Ross L. Levine**
**MD**

- Laurence Joseph Dineen Chair in Leukemia Research
- Director, MSK Center for Hematologic Malignancies

**Alan List**
**MD**

- President and CEO of Moffitt Cancer Center
- Internationally recognized for contributions in development of novel, more effective treatment strategies for MDS and AML

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# NMI-900 Products Address Large Unmet Clinical Needs

**Acute Myeloid Leukemia (AML)**

*Orphan drug designation*

$1.0B Market

- 40-60,000 in U.S. and 300,000 afflicted worldwide
- ***80-90% of patients are over age of 60***

**Myelodysplastic Syndrome (MDS)**

*Orphan drug designation*

$1.5B Market

- 20,830 annual U.S. diagnoses
- 10,460 annual U.S. mortalities
- ***27% of patients achieve 5-year survival; median survival is 22.8 months***

**Chronic Myelomonocytic Leukemia (CMML)**

*Ultra orphan drug designation*

>$100M Market

- 1,100 annual U.S. diagnoses
- Patients progress to AML

***Future: Solid Tumor (Breast, Ovarian & NSCL Cancers)***

>$5B Market

- 500,000 annual U.S. diagnoses



* "Cowen and Company. Therapeutic Categories Outlook. October 2014", "SEER.Cancer.gov, Nov. 2015" & "Needham and Company. AML Drug Development Update, April 2016."

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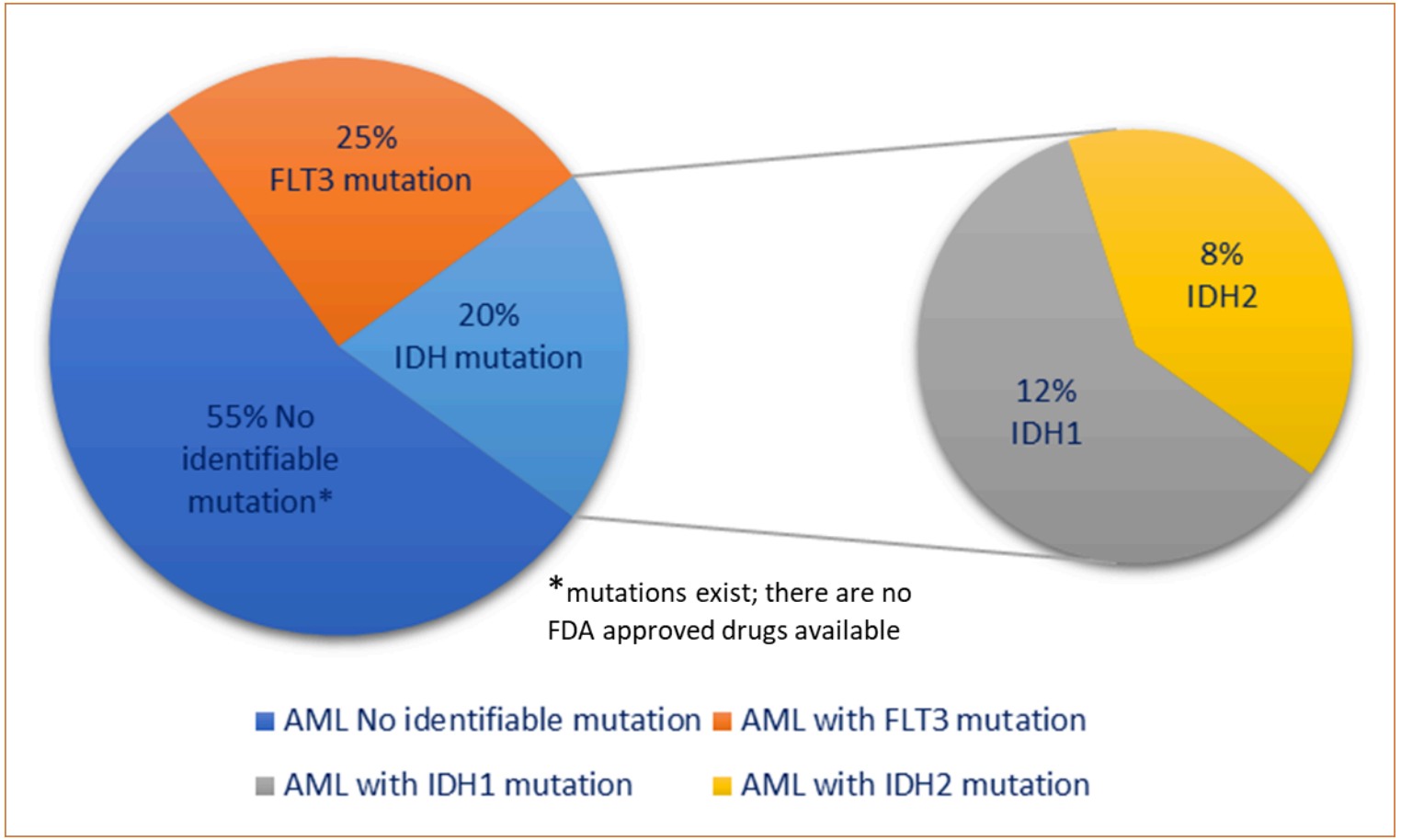
# Current Targetable Mutations in AML
# IDH: Isocitrate dehydrogenase & FLT 3: fms like tyrosine kinase 3





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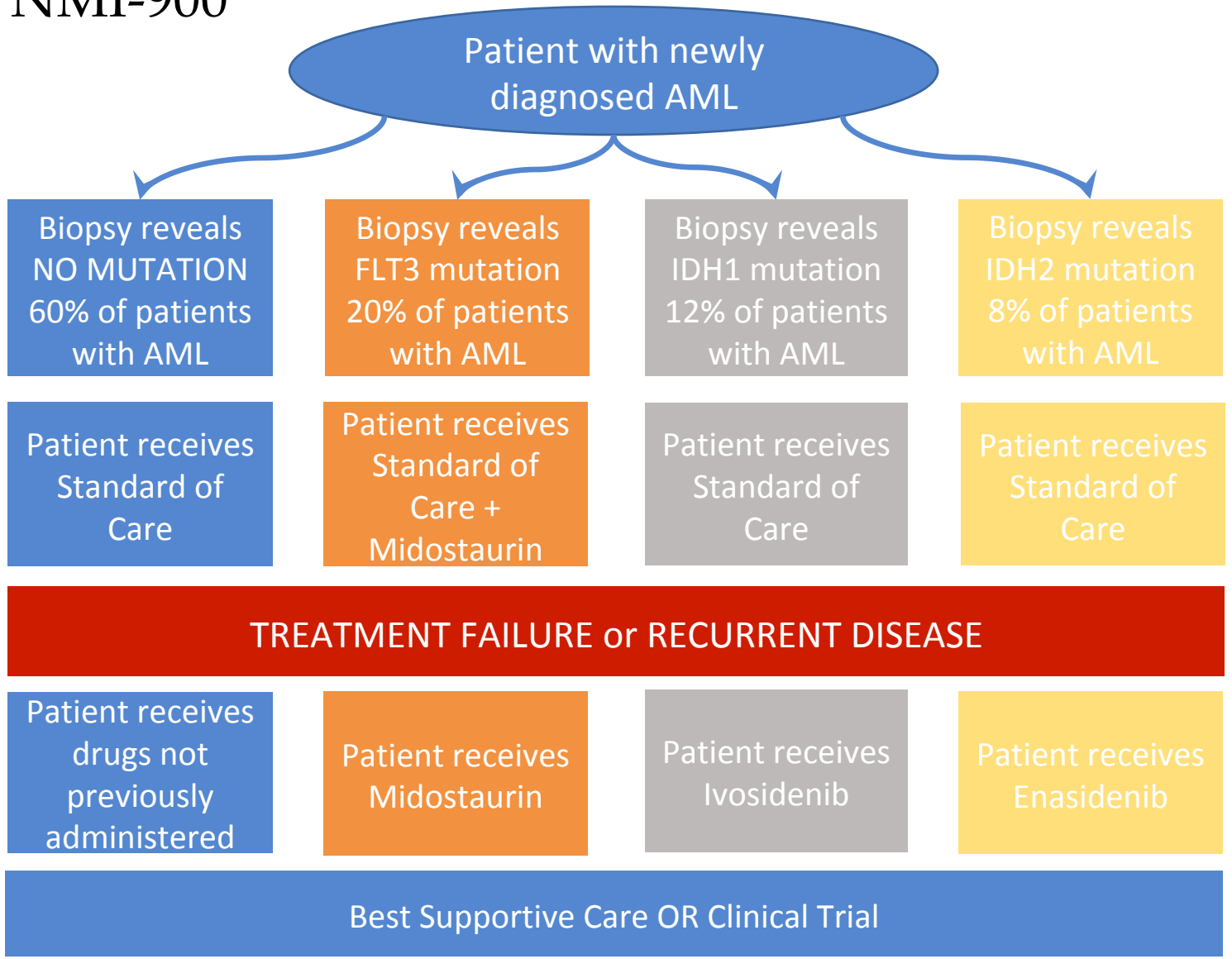
# Patient Treatment Paradigm Opportunity for NMI-900



NMI-900 + Companion Diagnostic remains an option to each patient

NMI-900 is agnostic to mutation status



# Targeting Underserved Populations with Significant Commercial Potential



| | Acute Myeloid Leukemia (AML) | Myelodysplastic Syndrome (MDS) | Chronic Myelomonocytic Leukemia (CMML) |
|---|---|---|---|
| Target Population | R/R[1] Patients with defined NMI-900 diagnostic scores | R/R Patients with defined NMI-900 diagnostic scores | R/R Patients with defined NMI-900 diagnostic scores |
| Five-year survival | 27% | Depending on risk group Range: 0.75-11.3 years | 10-20% |
| Incidence per year | ~ 20,830[2] | 15,351[3] | ~ 1,100[4] |
| Deaths per year | 10,480 | Progress to AML | Progress to AML |
| SOC[1] Response Rate | 40-55% | 50% | 50% |
| Approved for R/R | **FLT-3 Mutation**[1]**:** Midostaurin 25% reduction in risk of death **IDH1 Mutation:** Ivosidenib 38% ORR[1] **IDH2 Mutation:** Enasidenib 40% ORR | None | None |

[1]R/R = relapse refractory to standard of care; SOC = Standard of Care; ORR = Overall response rate; % of AML patients with Mutations: **FLT-3** ~25%, **IDH2** ~12%, **IDH1**~8%
[2]Needham and Company. AML Drug Development Update, April 2016
[3]https://www.lls.org/facts-and-statistics/facts-and-statistics-overview
[4]https://www.cancer.org/cancer/chronic-myelomonocytic-leukemia/about/key-statistics.html

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# License Agreements Will Contain the Following Intellectual Property



- Composition of matter patents issued
  - Twelve issued patents
  - Global protection US, EU and Japan
- Use in the treatment of cancer issued
- Formulation patent issued
- Covers entire family of candidates
- Diagnostic patent
- Additional use patents to be filed

# Five Areas of Capital Deployment to Build Shareholder Value



- Capital will be deployed over a 36-month time frame
- Drug Finish, Packaging and Labelling
  - Baxter BioPharma Solutions
- Clinical Trials, Regulatory and Diagnostic
  - **Pending:** AML/ HR-MDS Phase 1b/2 trial performed at Moffitt and MSKCC run with NMI's CRO Partner
  - **Future:** MDS-CMML Phase 1b/2 trial performed at Moffitt and MSKCC with CRO oversight
  - **Future:** Ovarian/Breast/Lung Cancer combination Phase 1b/2 trial performed at MGH, FCCC and Massey
- Manufacturing Additional NMI-900
  - Sigma-Aldrich (SAFC)
- Licensing Fees
  - NMI-900 Licensing fees
  - NMI-900 Diagnostic Licensing Fees
- Operations and Administration

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# Select Financial Information

## Key Capital Assumptions

Private, Pre-IPO Company

AML/MDS clinical trials ongoing during Years 1 and 2

Manufacturing of additional NMI-900

MDS-CMML trial expansion planned for Q2-Q3 of Year 2

Solid tumor “match” trial planned for Q3-Q4 of Year 2

Future financing will be pursued with data from successful AML/MDS trial

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# Company Highlights

- In-licensing driven business model – mitigates R&D risk
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- Focused on “Precision Medicine” development of NMI-900, leveraging significant Big Pharma investments
- NMI-900 and companion diagnostic address multiple cancer indications
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  - Breast cancer
  - Non-small cell lung cancer
  - Ovarian cancer
- Evidence of clinical activity and safety data NMI-900 Phase 1 trial
- Potential for clinical trial data over the next 18-36 months



* Companion Diagnostic option term extension being negotiated to match the NMI-900 term

# NMI-900: Safe and Clinically Active in Cancer Patients



- **Study Highlights**
  - Early efficacy signals - 61% clinical activity - superior to other Aurora Kinase Inhibitors
  - Highest response rate among Aurora Kinase Inhibitors in comparable clinic studies
  - Safe and well tolerated
  - Most prevalent side effect was predictable and treatable neutropenia

- **Study run by leading cancer centers in UK (May 2010 - June 2013)**
  - **Sponsor:** Cancer Research UK's Clinical Development Partnerships (CDP) program
  - **Clinical Trial Sites:** Leeds Cancer Centre at St. James's University Hospital, and Barts and The London School of Medicine
    - 36 patients with advanced/metastatic solid tumors; no standard therapy available
  - **ClinicalTrials.gov Identifier:** NCT01118611
  - **Presented and published:** ASCO 2013; *J Clin Oncology* 31, 2013 (suppl; abst 2525)

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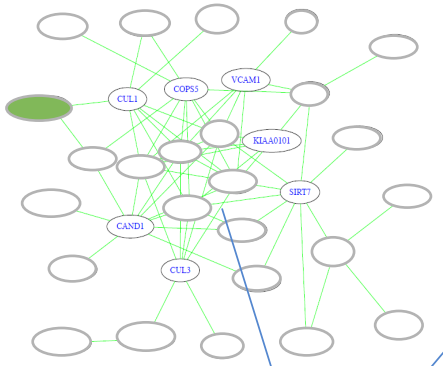
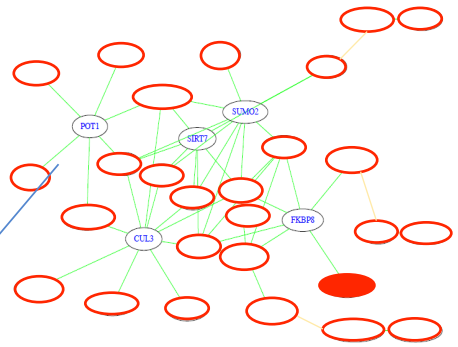
# NMI-900 Diagnostic Score Calculation and Testing a Clinical Trial Patient's Cancer

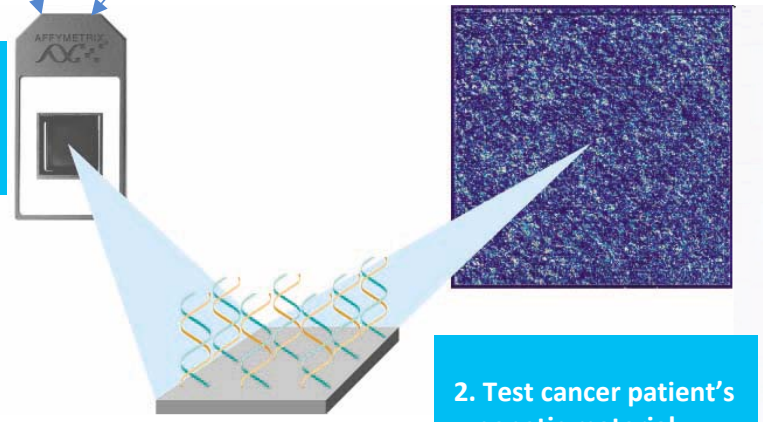
**NMI-900 Sensitivity Genes**




**NMI-900 Resistance Genes**




**1. "Program" Affy-chip with NMI-900 DRP signature**



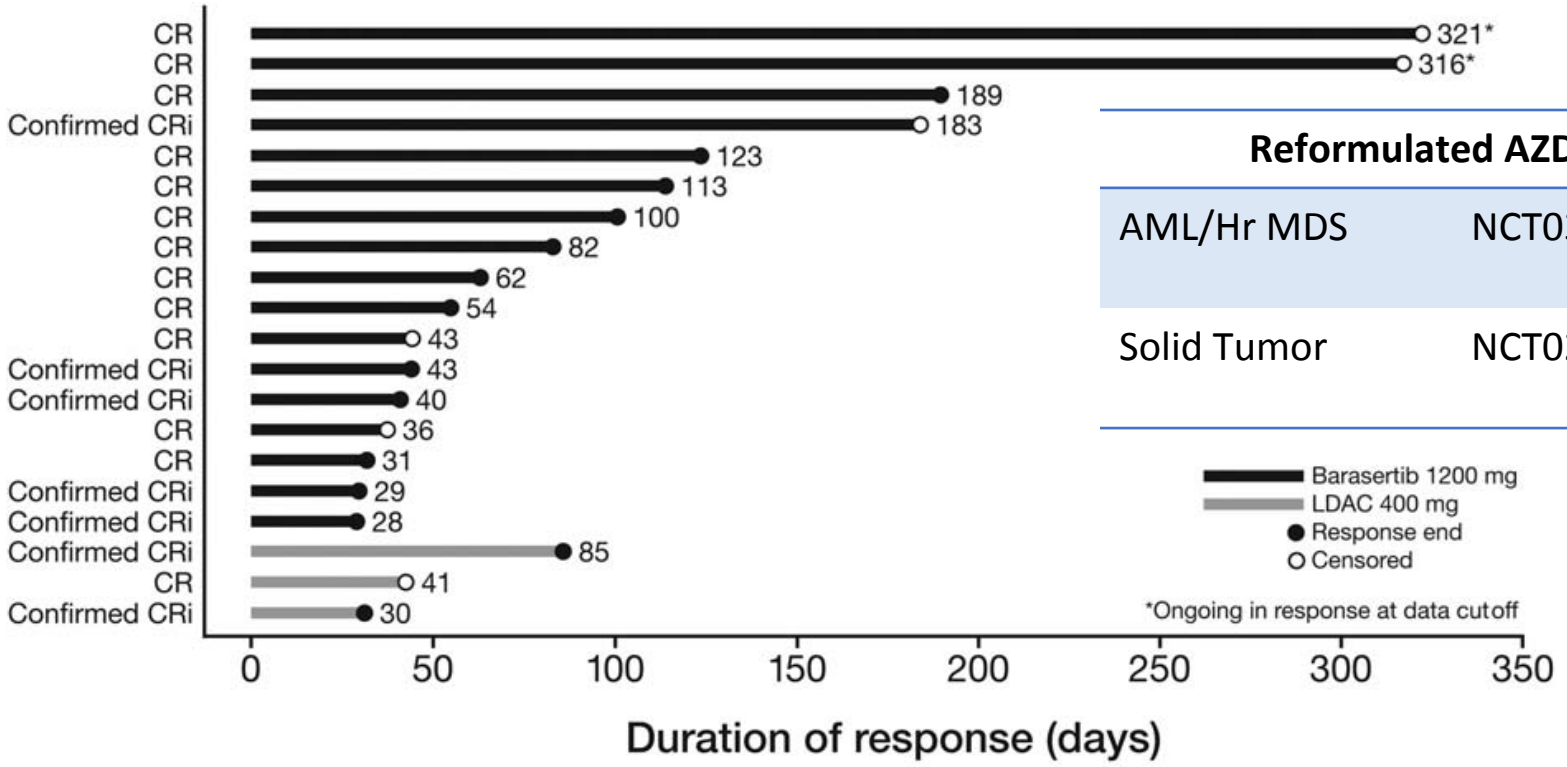

**2. Test cancer patient's genetic material**

**3. Calculate patient's cancer specific NMI-900 DRP Score**

**Dx Score**

**4. How sensitive is a patients cancer to NMI-900? Or Combination?**

# AML Supporting Data: Compelling 45% Clinical response to Aurora B kinase inhibitor AZD1152




*A confirmed CRi was based on the Cheson criteria and confirmed ≥21 days after first observation and with partial recovery of neutrophils and platelets*

**Reformulated AZD1152 = AZD2811**

| | | |
|---|---|---|
| AML/Hr MDS | NCT03217838 | July 2017 |
| Solid Tumor | NCT02579226 | Oct 2015 |

- Response duration to AZD1152 vs LDAC is illustrated [1]
- Major issue: Daily dosing x7 days (24 hour infusion)
  - Cancer. 2013 Jul 15;119(14):2611-9. doi: 10.1002/cncr.28113. Epub 2013 Apr 19