Introducing-

Magnis/Dx NGS Prep System
Walk Away from Preparations

Kevin Poon, Ph.D.
Assoc. Director, Marketing – NGS
Diagnostics & Genomics Group
Regulatory statement

Magnis NGS Prep System is For Research Use Only. Not for use in diagnostic procedures.
MagnisDx NGS Prep System is For In Vitro Diagnostic Use.
SureSelect XT HS is For Research Use Only. Not for use in diagnostic procedures.
Agenda

1. Background
   • Understanding labs around the world
   • NGS pain points & Workflow
2. Magnis – Walk Away from Prep
   • Powered by SureSelect
   • Revolutionary operational efficiency
3. The Magnis Benefit
   • What Have Testers Found?
Agilent Understands Laboratories

Lab Survey conducted with >500 labs (Commissioned to Frost & Sullivan)
139 Labs with Genomics Applications & Equipment
Lab Manager, Supervisors, Directors Surveyed – average >10 yrs lab experience

Key Challenge in the Lab

- #1 Downtime & Maintenance 24%
- #2 Workflow optimization 20%
- #3 Increasing complexity of tests 12%
- #4 Complex prep workflows 12%

* Least voted: Budget constraints; difficulty in hiring staff

Key Focus of the Lab in <18 Mo. (pick 3)

- #1 Ensuring higher productivity, throughput 53%
- #2 Improved system efficiency 50%
- #3 Attracting new customers/business 46%
- #4 Development of new services 42%

* Least voted: Receiving more funding /grants; implementing safety initiatives

Key Elements to Improve Productivity (pick 3)

- #1 Implement new technologies 55%
- #2 Maximize instrument use; reduce downtime 53%
- #3 Increase reliability of results 50%
- #4 Get results faster 41%

* Least voted: Lower cost per sample; free-up staff time for higher value activities

Background

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# Agilent NGS Workflow & Portfolio

**Expertise in key pain points of the workflow**

<table>
<thead>
<tr>
<th>Wet lab prep</th>
<th>Sequencing</th>
<th>Dry lab informatics</th>
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<tr>
<td><strong>Library preparation</strong></td>
<td><strong>Enrichment panels</strong></td>
<td><strong>Alissa Align &amp; Call</strong></td>
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<td>Blood</td>
<td>FFPE</td>
<td>Germline</td>
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<td><strong>Automation</strong></td>
<td><strong>QC</strong></td>
<td><strong>Alissa Interpret</strong></td>
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<tr>
<td>Automation</td>
<td>QC</td>
<td>Interpretation &amp; Reporting</td>
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- **Alissa Align & Call**
  - Alignment & Calling

- **Alissa Interpret**
  - Interpretation & Reporting

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Magnis NGS Prep System
Walkaway automation + reagents since inception

Magnis at a glance

- Affordable walk-away automation
- Hybrid-capture based NGS prep
- 8 reactions per run, up to 2 runs per day
- CE-IVD & RUO versions
- 64 cm(H) x 62 cm(W) x 72 cm(D) on a benchtop
All-inclusive pre-packaged reagents

- Includes magnetic beads & ethanol
- Barcoded for verification & tracking
- All packaged for single-run use (no aliquoting /freeze-thaw)

Temperature-controlled block
Smart camera

- Barcode scan for reagents
- Self-detect & Self-adjust (fiducial patterns on deck)

8-Channel pipetting

- Bravo shared tips
- 8 samples per run
- Heater/Shaker/Magnet for purification steps
- Space saving
- Time efficiency
Thermocycler

- Precise temperature control and amplifications on deck
- Single use PCR plate seal
- Final library storage up to 72hrs
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- Integrated touchscreen interface
- Step-by-step reagent loading guide
- Easy progress and status readout
Contamination-control
- Short & long UV exposure programs
- Single use, aliquot-free reagents
- Safe travel path, locking door
Touchscreen + Wizard = 5 minute Set Up

System Check:
Barcodes verified and recorded.
SureSelect Assays with Walk-Away Automation
More Manual NGS Prep? You can sleep on it.

**Manual:** SureSelect XT HS
- 9-hour workflow
- 2.5 hours hands on time

**Magnis:** SureSelect XT HS
- 9-hour workflow
- 5 minutes hands on time

- DNA Fragmentation (Mechanical or Enzymatic)
- End repair /A-tailing
- Adaptor ligation
- Clean-up
- PCR sample-indexing
- Clean-up
- Hybrid-capture
- Wash and PCR
- QC

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Assays: Powered by SureSelect
Custom, All-in-One (AIO) Cancer, Exome Panels

- Existing custom designs
- New All-in-One custom designs
  • pick your SNV, indel, CNV, translocations

- Catalog panel designs can found on SureDesign
  • Designs can be modified
  • Finalized your design and use on Magnis

- Direct catalog product available off the shelf
  • Additional exome products will be made available on Magnis

Custom, AIO Custom

AIO Lung Cancer
(Any Catalog Design)
AIO Solid Tumor

Exome V7
Magnis shines
When time is of the essence

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<thead>
<tr>
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<th>Monday</th>
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<tr>
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<td>HTA lib prep</td>
<td>Overnight hyb</td>
<td>HTA Day2</td>
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<td>Analysis &amp; Report</td>
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<td>Fast track</td>
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<tr>
<td>Magnis Operation</td>
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<td>Magnis lib prep</td>
<td>Sequencing</td>
<td>Analysis &amp; Report</td>
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Sample in Mon

Magnis Report out Wed (3 days)

Routine Report out Mon (1 week)

HTA = High Throughput Automation

HTA = High Throughput Automation

DNA prep

HTA lib prep

Overnight hyb

HTA Day2

Sequencing

Analysis & Report
The Magnis Benefit
What our testers say after running Magnis

90% reduction in labor time

Reduce library prep variation to as low as 5%

40% reduction in overall TAT from sample-to-report

Could reduce lab space needs by 45%

Distinct coverage was higher in most cases using Magnis than samples processed manually.

A lower Limit of Detection was observed from the libraries processed on Magnis.

Sensitivity obtained on Magnis was equivalent to or improved from manual in all variant types.

Accuracy was high between clinical cases processed manually and on Magnis.
Order Magnis Today

Magnis & MagnisDx Instruments

Magnis SureSelect XT HS Custom Kits
- 96 rxn & 32 rxn formats (12 run, 4 run respectively)
- Library Prep + Probes + 32 (Unique) Indexes included

Magnis SureSelect XT HS Catalog Kit(s)
- 96 rxn & 32 rxn formats (12 run, 4 run respectively)
- Library Prep + 32 (Unique) Indexes included
- Human All Exon v7 probes included

Magnis SureSelect XT HS (No Probe) Kit (96 rxn)
- Library Prep + 32 (Unique) Indexes included
- Empty probe strip; probes purchased separately

G9477G Pipette Tips for Magnis (50 pack)

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<tr>
<th>Name</th>
<th>PN</th>
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<tbody>
<tr>
<td>MagnisDx Instrument (CE-IVD version)</td>
<td>K1007AA</td>
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<tr>
<td>Magnis Instrument (RUO version)</td>
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Summary: Magnis(Dx) NGS Prep System

Features
- Automation designed for the benchtop
- Prepare 8 libraries per run, up to 16 libraries per day
- CE-IVD mark

Key Benefits
✓ Reproducible results: Enable NGS users from novice to expert alike to generate consistent libraries.
✓ Easy to set up: Touchscreen wizard, pre-packaged reagents, and barcode checking for reduced errors.
✓ Walk-away automation: No need to move samples to a thermal cycler or load more tips during run.
✓ SureSelect XT HS: Optimized for FFPE samples, for customized large and small panel designs.