Agilent Technologies :

Nos différentes approches en Génomiques

Maarten Pirson
Field Application Specialist
27/11/2024

NGS-CGH / Des approches complémentaires

Investir dans le futur sans compromis avec la qualité

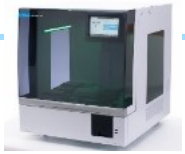
NGS — SureSelect & Avida

Sample QC

TapeStation
Fragment Analyzer

Automation

Magnis
Bravo



CGH

CGH Microarrays – Réactifs
Scanner SureScan

Agilent Chromosomal Microarray Analysis IVDR solution

Un ensemble de produits pour chaque besoin

CMA stand alone reagents

La flexibilité pour les utilisateurs

IVDR Class A depuis le 26 Mai 2022

SureScan Dx Microarray Scanner

- Provides confidence in your results with excellent sensitivity and wide dynamic range
- Easy to use and flexible due to continuous slide loading and random scanning capability
- Fully integrated with data analysis software for a seamless workflow

Dx Reagents

- Labeling, hybridization and washing reagents are validated for diagnostic use and optimized for use with the GenetiSure Dx Postnatal array
- GenetiSure Dx DNA labeling kit for direct labeling of DNA
- All reagents have been designed to streamline sample processing

Intended Use

GenetiSure Dx Postnatal Assay is a qualitative assay intended for the postnatal detection of copy number variations (CNV) and copy-neutral loss of heterozygosity (cnLOH) in genomic DNA obtained from peripheral whole blood in patients referred for chromosomal testing based on clinical presentation. GenetiSure Dx Postnatal Assay is intended for the detection of CNVs and cnLOH associated with developmental delay, intellectual disability, congenital anomalies, dysmorphic features, or clinical presentation suggestive of a chromosomal syndrome. Assay results are intended to be used in conjunction with other clinical and diagnostic findings, consistent with professional standards of practice, including confirmation by alternative methods, parental evaluation, clinical genetic evaluation, and counseling, as appropriate. Interpretation of assay results is intended to be performed only by healthcare professionals, board certified in clinical cytogenetics or molecular genetics.

The assay is intended to be used on the SureScan Dx Microarray Scanner System and analyzed by CytoDx Software. This device is not intended to be used for standalone diagnostic purposes, pre-implantation or prenatal testing or screening, population screening, or for the detection of, or screening for, acquired or somatic genetic aberrations.

GenetiSure Dx Postnatal Assay

Un workflow complet, de l'ADN jusqu'au résultat

IVDR Class C depuis le 18 decembre 2023 (NB Certificate)

GenetiSure Dx Postnatal Array

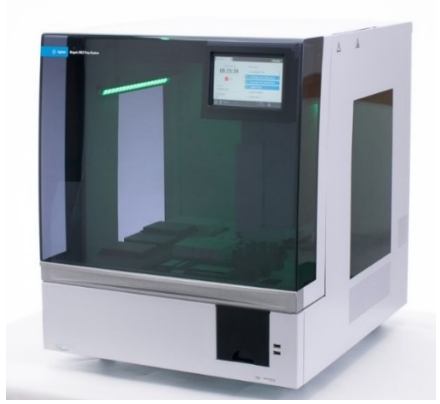
- CGH+SNP microarray designed and validated for postnatal samples
- Increased resolution in targeted genomic regions of known dose-sensitivity and significant clinical interest
- Whole-genome CN and LOH in a single assay
- High-fidelity 60-mer oligonucleotides based on the Agilent OLS technology

CytoDx

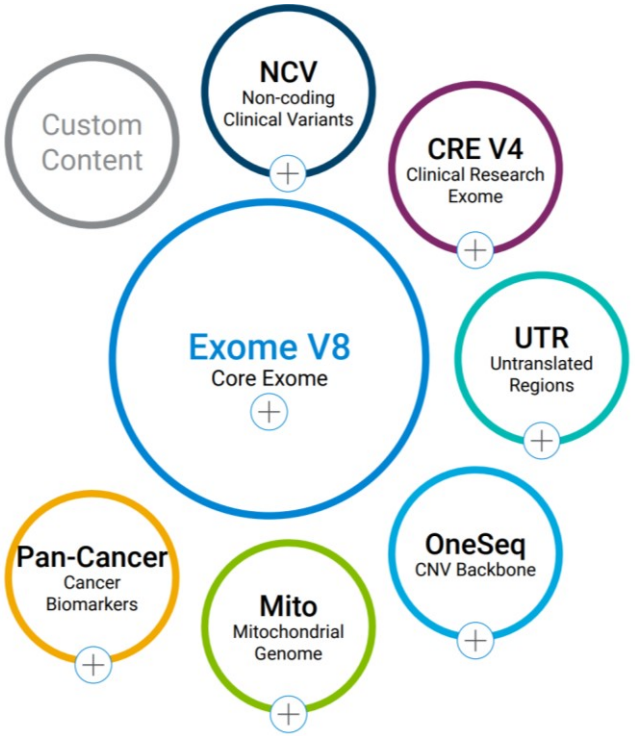
- Streamlined workflow for data analysis
- Validated algorithms for analysis of the Agilent GenetiSure Dx Postnatal array
- Pre-loaded tracks and links to external databases for data interpretation and evidence support

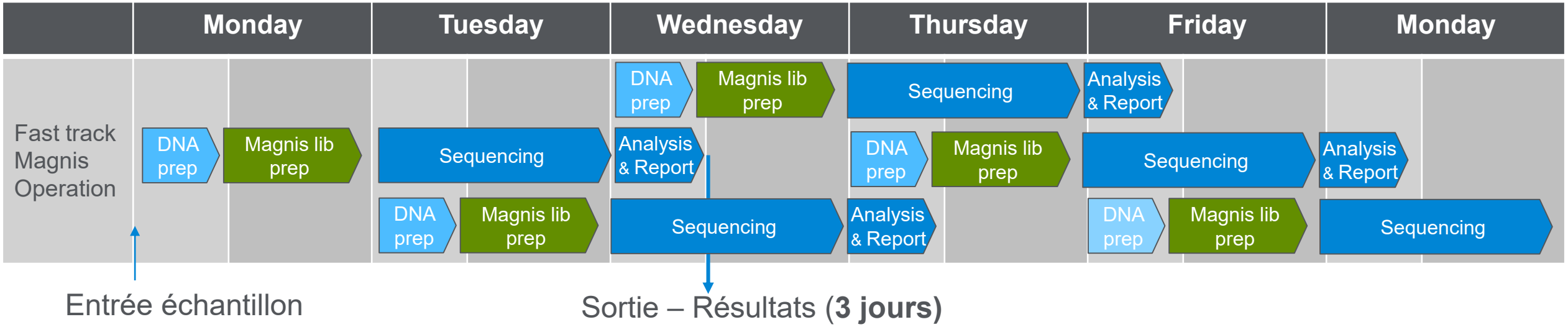
Rapid CES (Clinical Exome Seq) sur Magnis

Lorsque le temps est compté – 5 runs par semaine par Magnis



IVDR Class A depuis le 26 Mai 2022





Nouvelle solution multiomique d'enrichissement ciblé

Des performances élevées et des capacités multiomiques

Avida DNA reagent kits
- Library prep
- Target Capture
- Indexing PCR

Avida Methyl reagent kits
- Library prep
- Target Capture
- Bisulfite Conversion
- Indexing PCR

Avida Duo reagent kits
- Library prep
- Target Capture DNA+Methyl
- Bisulfite Conversion
- Indexing PCR

- 3 kits complets pour soutenir l'ensemble du process, de l'ADN aux librairies NGS enrichis
  - Billes et réactifs de conversion inclus
- Pour les workflows DNASeq et de MethylSeq, ainsi que le Duo (ADN + méthylation).
- Les mêmes kits peuvent prendre en charge l'automatisation sur les systèmes Bravo

Applications Recherche

Rare Disease Epigenetics • Cohort Screening • MRD • Monitoring • Early Cancer Molecular profiling • Multiomic Characterization • Biomarker Discovery

Workflows permettant l'expansion vers le multiomique.

Approche modulaire pour le profilage de l'ADN et de la méthylation dans un workflow simple ou duo.

No pre-capture PCR!

DNA Targets

- Extraction
  Fragmentation (optional)
- Library Prep
- Capture
- Index + amplify
- Pool + Seq

Methyl Targets

- Extraction
  Fragmentation (optional)
- Library Prep
- Capture
- Conversion
- Index + amplify
- Pool + Seq

Duo Workflow | DNA + Methylation

- Extraction
  Fragmentation (optional)
- Library Prep
- Capture 1
  DNA variants
- Supernatant
- Capture 2
  Methylation markers
- Conversion
- Index + amplify
- Index + amplify
- Pool + Seq

	DNA Targets	Methyl Targets	Duo Workflow | DNA + Methylation
Agilent TAT*	**5 hrs**	**6.5 hrs**	**8.5 hrs**
Competitor TAT*	**8 hrs – 2 days**	**1.5 – 3 days**	Not available combined – must run independent workflows

*TATs exclude extraction and fragmentation time