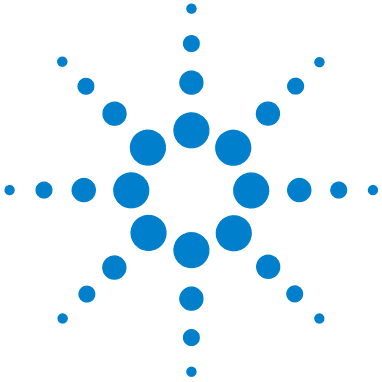

Agilent CytoGenomics 1.5

Product Overview Guide

Research Use Only. Not for Diagnostic Procedures.

Agilent Technologies

What is Agilent CytoGenomics?

Agilent CytoGenomics software is a rapid way for cytogenetics laboratories to set up and run workflows, manage sample attributes, extract features, and analyze CGH and CGH + SNP microarray data. After analysis, you can examine QC results, analysis results, and generate cyto reports for researching cytogenetic changes in research samples.

Agilent CytoGenomics provides cytogenetic laboratories security data access through three types of user roles: Technician, Scientist, and Administrator. Each of the three user roles has unique permissions to access a selected set of features and data in the software. (See Table 1 on page 11.)

An Agilent CytoGenomics workflow (Figure 1) takes a microarray image through Feature Extraction. The extracted data is then filtered and analyzed and aberrant intervals are called out. Aberrant intervals can be edited, suppressed, added, or classified during sample triage. A set of reports is generated at the end of the workflow, including a customizable cyto report.

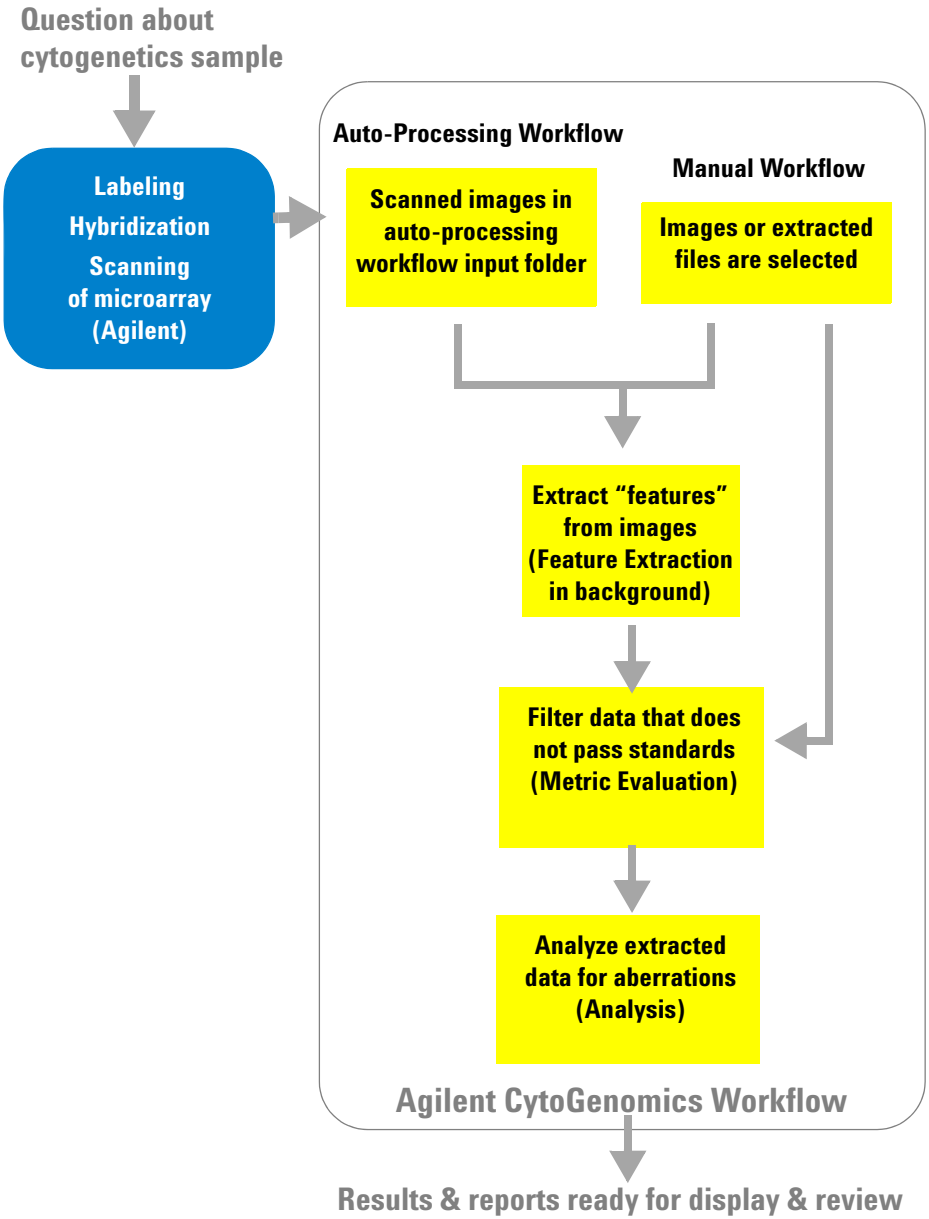

Figure 1 Agilent CytoGenomics Workflow - from image to result

Getting Help

To get help within Agilent CytoGenomics 1.5

Agilent CytoGenomics 1.5 has several help guides. To open a help guide, on the right side of the Agilent CytoGenomics 1.5 tab ribbon, click the **Manuals** arrow. Select the help guide you want to display. Help guides are opened in Adobe® Reader® software.

- To run manual or auto-processing workflows, and review and sign off results, follow the instructions in the *Running CytoGenomics Analyses User Guide*.
- To learn how to configure system defaults and use Quality Tools to review and chart QC data, see the *Setup and Quality Review User Guide*.
- To learn how to add users and assign roles and change database parameters for client computers, see the *Installation and Administration Guide*.
- Descriptions of windows and dialog boxes for all roles are in the *Reference Guide*.

Help videos are also available from within the Agilent CytoGenomics 1.5 program. These short videos give you instructions for doing basic tasks within Agilent CytoGenomics 1.5. To start a help video, on the right side of the Agilent CytoGenomics 1.5 tab ribbon, click **Help Videos**, and select the video you want to watch.

To contact Agilent Technical Support

Technical support is available by phone and/or e-mail message. Various useful information is also available on the Agilent Technical Support website.

Resource	To find technical support contact information
Agilent Technical Support website	**1** Go to http://chem.agilent.com. **2** Select a country or area. **3** Under Quick Links, select **Technical Support**. **4** Select from the available links to display support information.
Contact Agilent Technical Support by telephone or e-mail message (United States and Canada)	Telephone: (800-227-9770) E-mail message: informatics_support@agilent.com
Contact Agilent Technical Support by telephone or e-mail message (for your country)	**1** Go to http://chem.agilent.com. **2** Select **Contact Us**. **3** Under Worldwide Sales and Support Phone Assistance, click to select a country, and then click **Go**. Complete e-mail message and telephone contact information for your country is displayed.

To learn about Agilent products and services

To view information about the Life Sciences and Chemical Analysis products and services that are available from Agilent, go to www.chem.agilent.com.

Key Features

This section provides an overview of the features and capabilities available in Agilent CytoGenomics 1.5. The “tabs” at the top of the program window provide access to related tasks and commands. Users see only the tabs for which they have access, according to their assigned user role. (See “User Roles and Capabilities” on page 11.)

The Analysis tab – running analyses and reviewing data

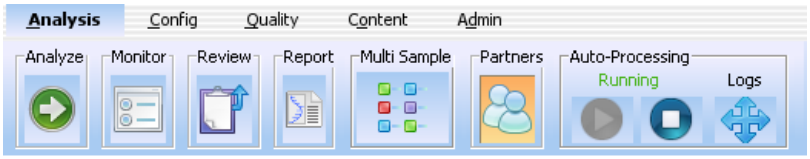

Figure 2 Analysis tab and commands (all user roles)

Capabilities within the Analysis tab include:

- Run manual or auto-processing workflows
- Add sample information
- Monitor workflow jobs
- Display cyto reports and aberration results
- Triage samples
  - Check in/out samples
  - Add sample and interval notes
  - Modify, add, or suppress calls
  - Add/change interval classifications
  - Search database for similar classified intervals
  - Sign off samples and generate sign-off reports (Scientists and Administrators only)
- Transfer results to Cartagenia BENCH
- Display auto-processing run status

The Config tab – set up system defaults and workflows

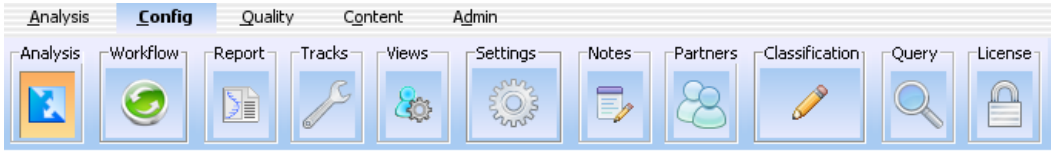

Figure 3 Config tab and commands (Scientists and Administrators only)

Capabilities within the Config tab include:

- Set up analysis and workflow parameters (Figure 4)
- Create customized cyto report templates
- Configure system preferences, including
  - Dynamic and static tracks
  - Default view preferences
  - Default input/output folders
  - Auto-Processing workflow settings
  - Standard notes, classifications, and queries
  - Cartagenia BENCH data transfer settings
- Display or change program license

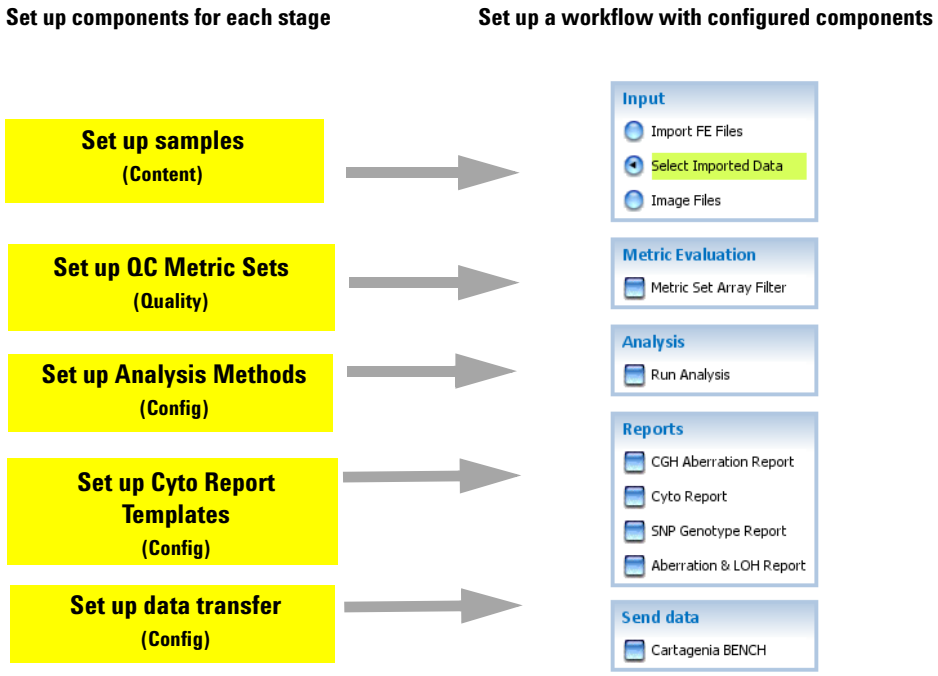

Figure 4 Setting up a workflow

The Quality tab – setting and charting quality metrics

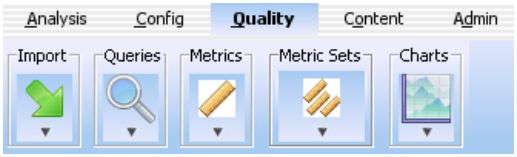

Figure 5 Quality tabs and commands (Scientists and Administrators only)

Capabilities within the Quality tab include:

- Import quality metrics

- Create, change, and run quality queries
- Create quality metrics and combine them into metric sets
- Create and display quality charts to plot QC trends

The Content tab – managing database samples and designs

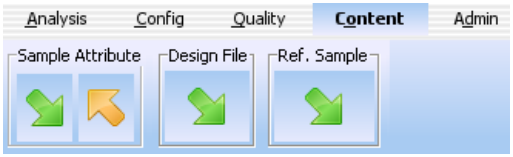

Figure 6 Content tab and commands (Scientists and Administrators only)

Capabilities within the Content tab include:

- Import and export sample attribute files
- Import design files
- Import genotype reference files
- Display list of samples in the database, organized by design
- Add and change sample attributes
- Show and hide sample attributes
- Manually add Array IDs and attributes
- Display protocol details
- Display lists of extracted samples by barcode or by date of extraction
- Start the Feature Extraction program

The Admin tab – managing users and database

Figure 7 Admin tab and commands (Administrators only)

Capabilities within the Admin tab include:

- Add new users and assign roles
- Change roles for existing users
- Enable/disable user access to the program
- Display or change database connection parameters for the client computer

User Roles and Capabilities

The following table lists the capabilities allowed for the three different user roles within Agilent CytoGenomics 1.5.

Table 1 User roles and capabilities

Role	Tasks and capabilities

Technician	• Run manual or auto-processing workflows
	• Add sample information
	• Monitor workflow jobs
	• Display reports and aberration results
	• Triage samples
	  • Check in/out samples
	  • Add notes
	  • Add or suppress calls
	  • Add/change interval classifications.
	• Transfer results to Cartagenia BENCH
	• Display auto-processing logs
	(Technicians cannot sign off samples.)

Scientist	Technician tasks, plus:
	• Configure system preferences, including
	  • Default input/output folders
	  • Auto-processing workflow settings
	  • Default view preferences
	  • Dynamic and static tracks
	  • Cartagenia BENCH data transfer settings
	• Set analysis and workflow settings
	• Create standard notes, classifications, and queries
	• Create customized cyto report templates
	• Manage samples
	• Evaluate and chart QC trends
	• Sign off results

Administrator	Complete system access, including all Technician and Scientist tasks, plus • Add users and roles • Change database connection settings for client systems

www.agilent.com

In this book

This book provides an overview of Agilent CytoGenomics. It shows the overall design of the software and how different users can work with it to fulfill their roles in the laboratory.

Revision A0, June 2011

G1662-90000

Agilent Technologies