Version 15

Main improvements

This document lists the main improvements of Valab 15.01. For a full list of all the modifications made to Valab 15.01, please refer to the corresponding Release Notes for this version.

# Opening up of the rules models of the original standard tests

As is already the case for "à la carte" Auto-Expert tests, with the new version of Valab it is now possible to consult and configure the autoverification rules for the original standard tests provided with the standard Valab modules.

Consulting the influences in the original standard rules model for each numerical original standard test

This new functionality allows you to list for each numerical (quantitative) original standard test all of the items (contextual data, other tests) which exert an influence in the original rules model of the selected test.

Reminder: The original standard tests provided with the standard Valab modules are identifed by the letter 'F' in the *Type* column of the *Test parameter settings* window.

These settings are located at the *Expertise / Influences* node in the setup window of the original standard test:
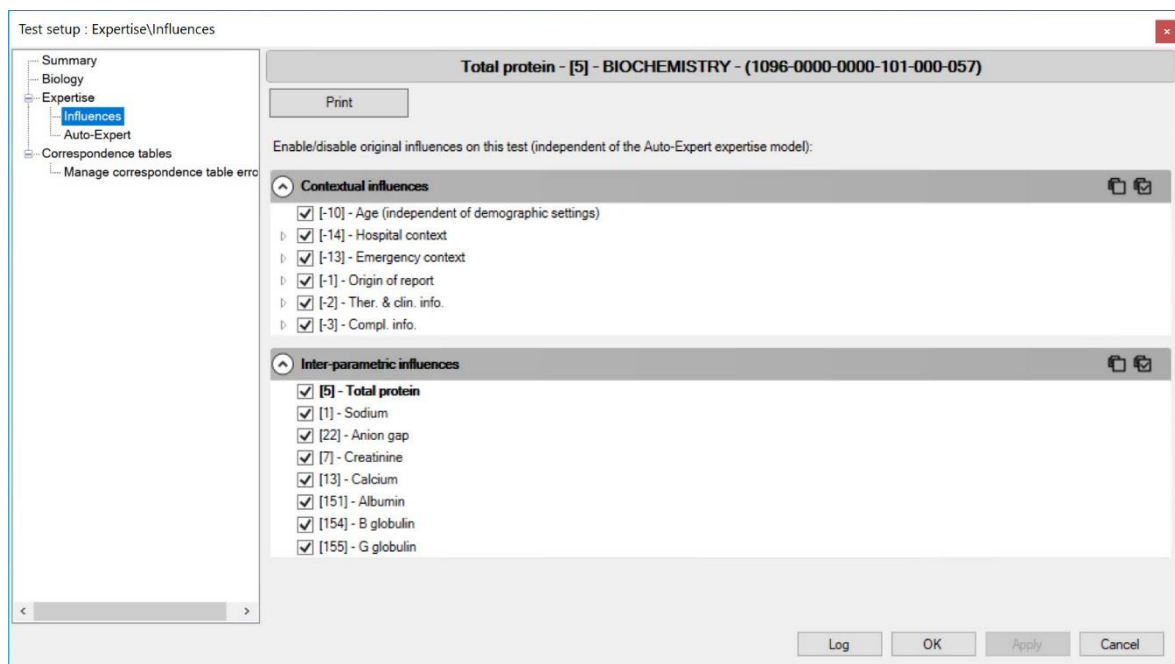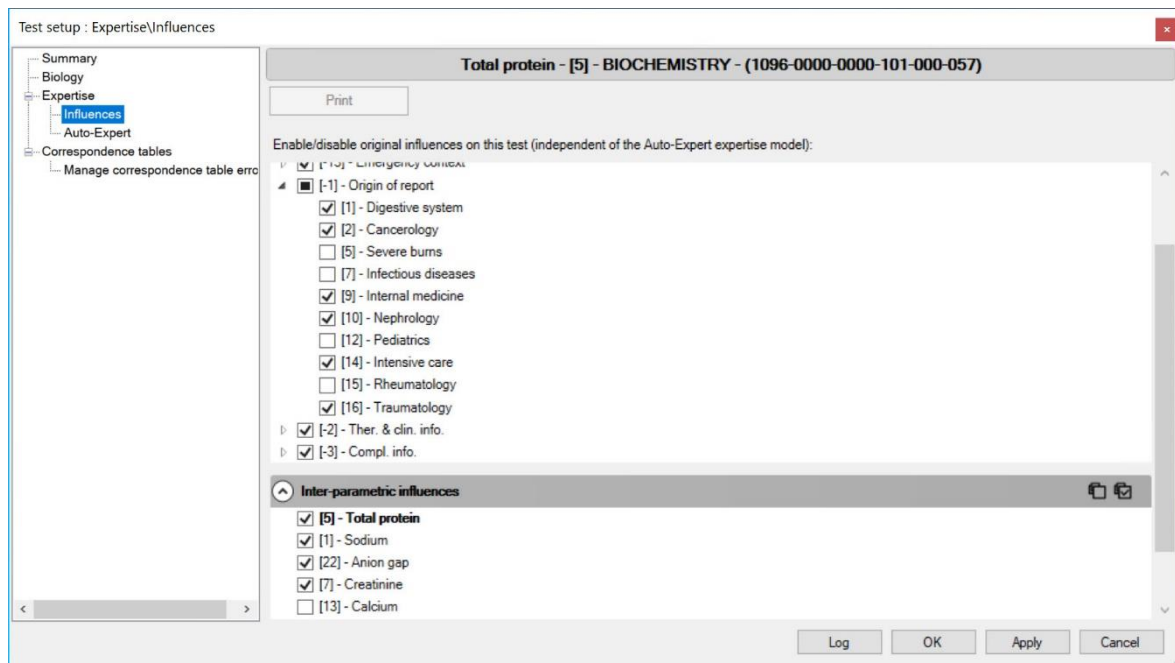

Consulting these influences is only available to Valab users with read access rights for *Demographic / Auto-Expert rules* in the user account administration options.

Configuring the influences of the original standard rules model for each numerical original standard test

This new functionality allows you to disable / re-enable individually the influence of each influential contextual or inter-parametric data item in the original standard rules model of each numerical (quantitative) original standard test.

These settings are located at the *Expertise / Influences* node in the setup window of the original standard test:

Modifying the influences in the original standard rules models of numerical (quantitative) original standard tests is only available to Valab users with read / write access rights for *Demographic / Auto-Expert rules* in the user account administration options.

The files containing the original-influence disable settings, in "RUL" format, are stored in the "EXPERT" directory. To ensure data confidentiality, these files are encrypted using 128-bit AES encryption in CBC mode with an integrity check based on over-encrypted CBC-MAC.

Auto-Expert rule modeling for numerical original standard tests

Modeling contextual and inter-parametric autoverification rules with the Auto-Expert module has been extended to numerical (quantitative) original standard tests.

This new functionality lets users complete the original standard rules model setup of these tests with their own Auto-Expert rules.

As a complement to the new functionality allowing to disable the influences in the original standard rules model of numerical original standard tests, it allows the user to redefine the influence of the contextual and inter-parametric data on the autoverification of these tests.
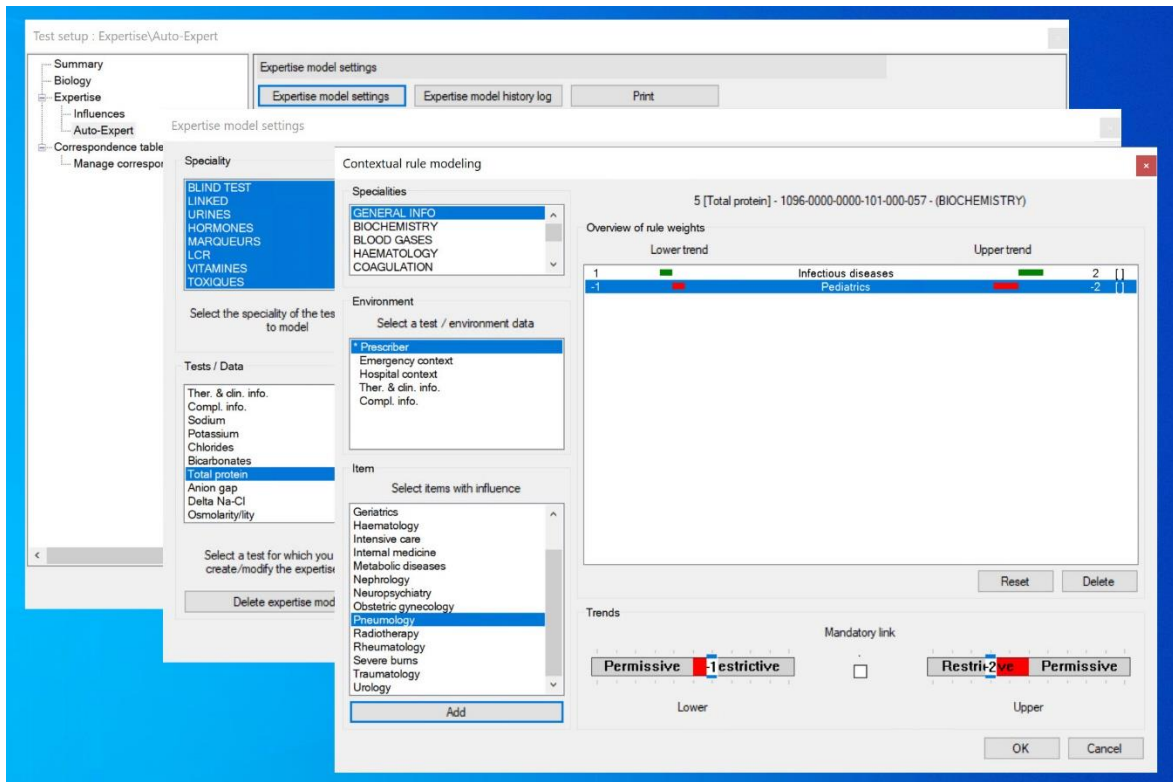
Import / Export of original standard test rule models

The import / export mechanism for "à la carte" Auto-Expert tests has been extended to the original standard tests provided with the standard Valab modules.

The original-influence disable settings and Auto-Expert rules model setup are included when these tests are imported / exported thanks to the new import / export mechanism (files in "TEF" format).

New autoverification functionalities

New functionality allowing demographic exclusion from the autoverification

It is now possible to exclude an entire age and / or sex category from the autoverification for a numerical test thanks to an exclusion mechanism applied to a given sex and / or age class.


If a test in a report is rejected as a result of demographic exclusion, the test receives the flags "C>" or "C<" and "A>" or "A<" depending on the presence or not of a previous result and the trend.

New Therapeutic and Clinical Information (TCI) items

The following items have been added to the list of Therapeutic and Clinical Information (TCI) items:

- 188 - Direct Factor IIa inhibitor

- 189 - Direct Factor Xa inhibitor
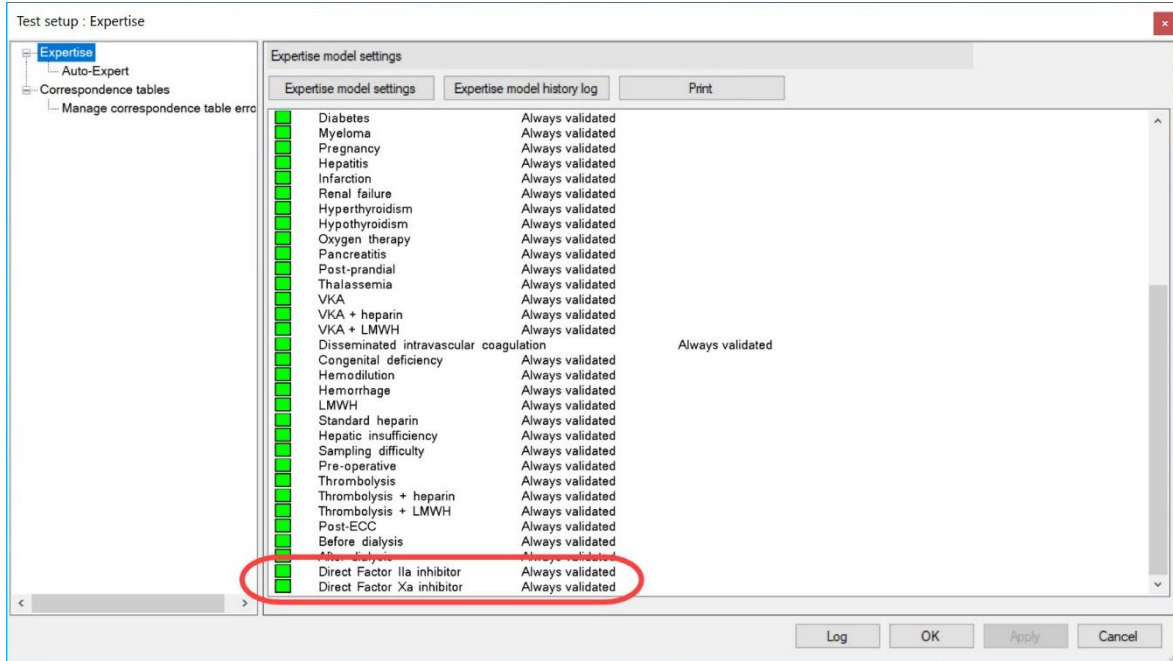
By default, the "Direct Factor IIa inhibitor" item has the same autoverification rules as the "Standard heparin" item and the "Direct Factor Xa inhibitor" item has those of the "LMWH" item.

They therefore have the same influence on the autoverification of numerical original standard tests and the same symbolic autoverification rules for TCI items.

Autoverification flags carry-over mechanism

The parent numerical test of a linked test is taken into account if a "technical" label is received

If a numerical (quantitative) test contains a "technical" label (coded text), i.e. present in the test's *Technical* correspondence table, it is now considered to be autoverified and its linked tests return the flag of the parent (previously the parent test was considered to be "out of scope" and the linked test received an "eX" flag).

The following schematic presents the different scenarios encountered and how these scenarios are managed by Valab.
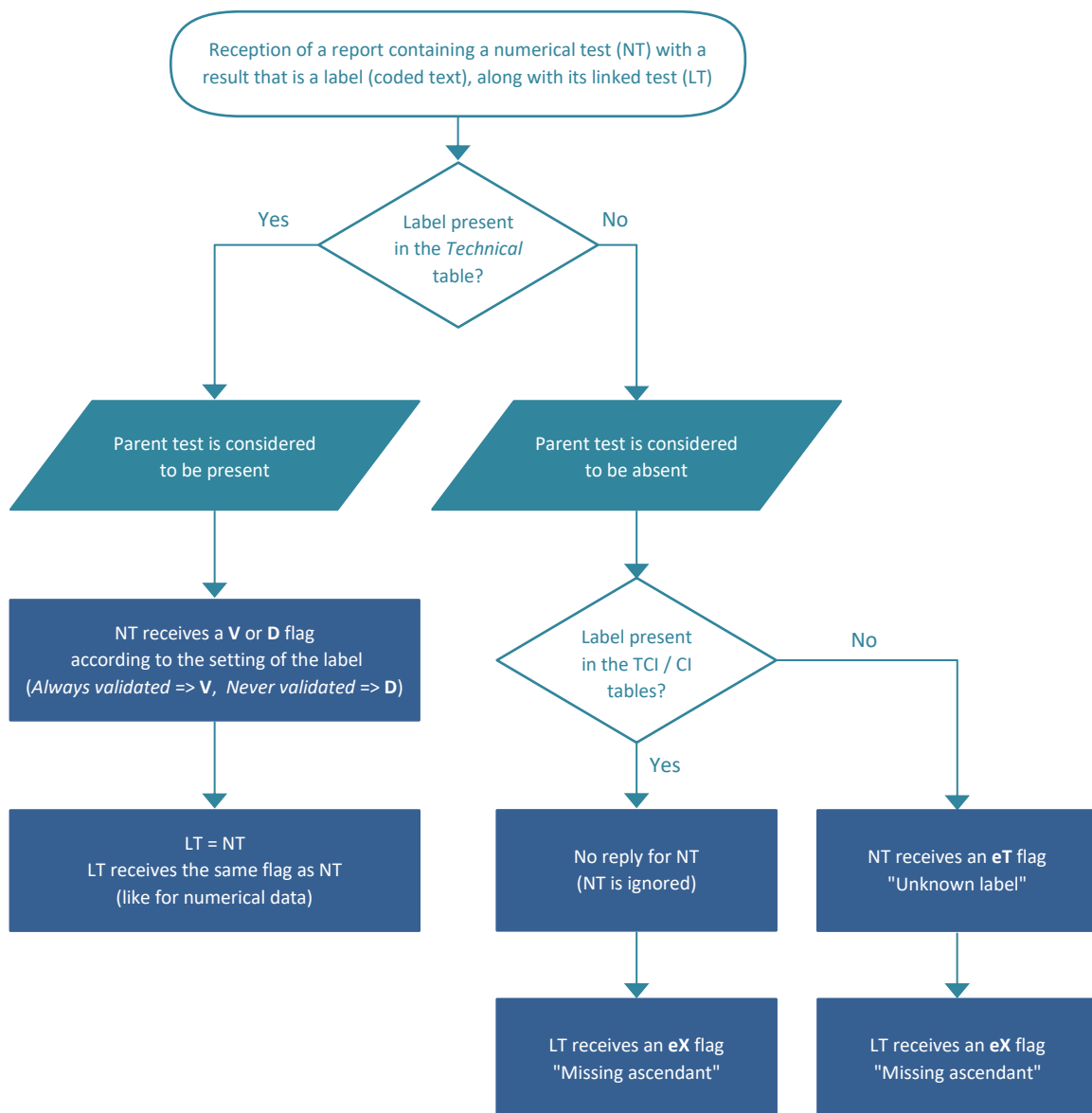
Overhaul of the test import / export mechanism

Complete overhaul of the test import / export mechanism in order to take into account the original standard tests and their new configuration mechanisms. The original standard tests, and also Therapeutic and Clinical Information (TCI) and Complementary Information (CI) items, can now be exported and imported.

The export function now generates a file in "TEF" format (extension ".tef") protected by an integrity check and containing the following items :

- the biological (clinical) setup, partial for original standard tests and full for Auto-Expert tests

- the Auto-Expert rule model setup, including the demographic rules and their new exclusion mechanism, for all of the tests

- the original-influence disable settings, only for numerical (quantitative) original standard tests provided with the standard Valab modules

For backward compatibility reasons, it is still possible to import ".imp" files generated with previous versions of Valab.

Improved details of the number of additional tests

In the *Test parameter settings* window, additional information has been added to the *Details* sub-window displaying the number of additional tests already created / used and the number of additional tests that can still be created.
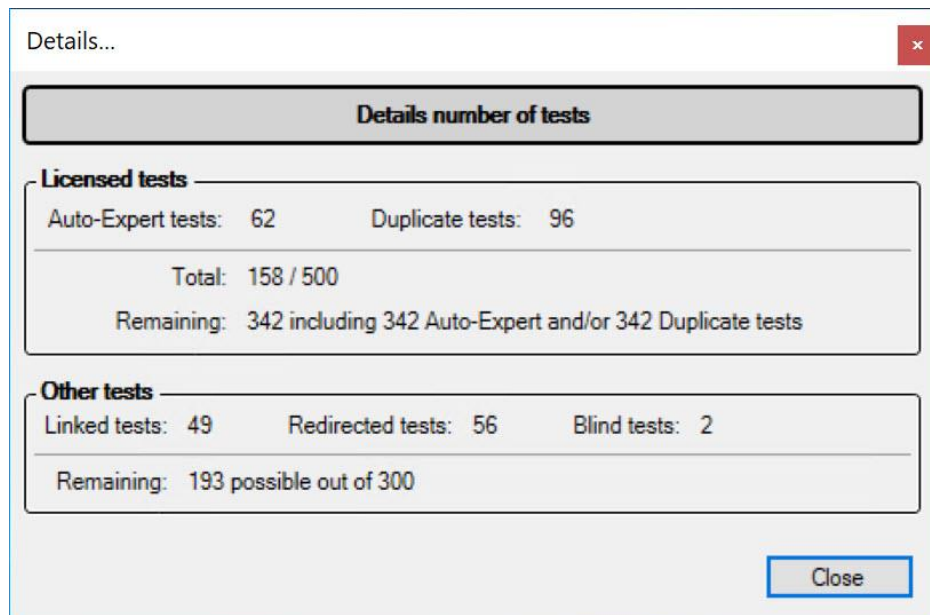
Security and protection of sensitive data

Encryption of patient report files

As part of the move to strengthen the security and confidentiality of personal data processed by Valab, patient report files are now encrypted using 128-bit AES encryption in CBC mode with an integrity check based on over-encrypted CBC-MAC.

Encryption of log files

As part of the move to strengthen the security and confidentiality of personal data processed by Valab, log files of the exchanges between the LIS and Valab are now encrypted using 128-bit AES encryption in CBC mode.

Encryption of the connections between applications

API communication between the Valab Server, Valab client and VALAB_Node modules is now encrypted through the SSL protocol (SHA-256) with the use of auto-generated certificates.

It is also possible to encrypt the communication between Valab Server and other tools through the SSL protocol (SHA-256) with the implementation of a certificate. Today this encrypted communication is only used by dedicated tools used by VALAB Customer Support and by Valab automated test tools but in the future it will be used to implement a thin client Valab web interface.
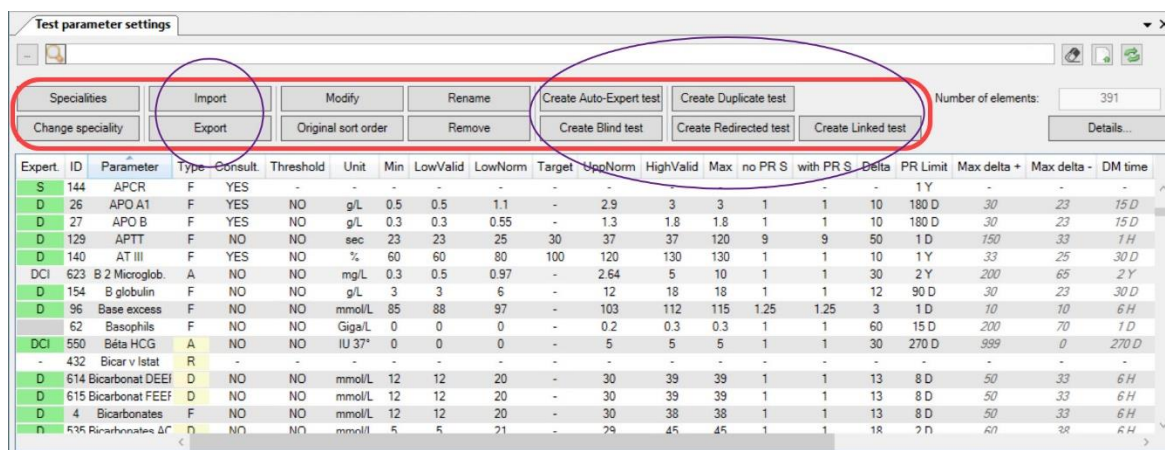
Updated logos

The icons and logos of the Valab application have been redesigned to have a more modern appearance:

Direct access to the test creation / modification / import / export functions

In order to simplify the job of the users, the buttons of the *Test parameter settings* window have been reorganised:
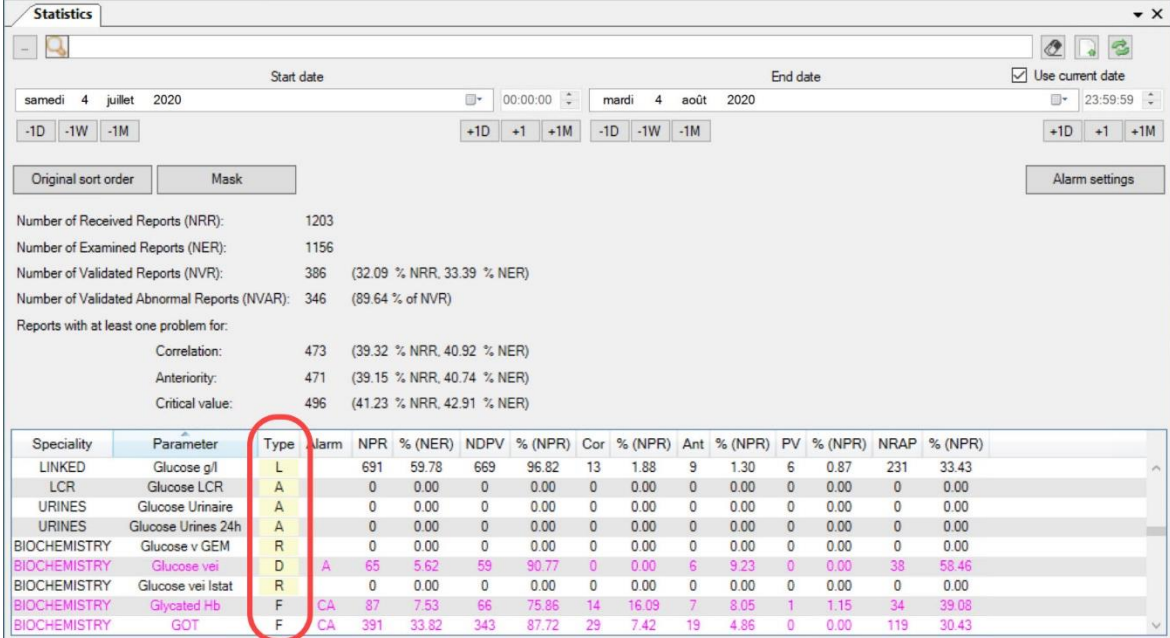

As a result of the opening up of the original standard test rule models, the intermediate *Create/Import an Auto-Expert test* window, opened by the previous **Auto-Expert** button, no longer exists and the previous **Create test** and **Auto-Expert** buttons have been replaced by individual buttons allowing users to create directly the different types of tests (Auto-Expert tests, duplicate tests, linked tests, redirected tests, blind tests).

Similarly, the import / export functionalities for tests are now also directly accessible through dedicated buttons.

In a final simplification, the button previously used to modify the global refusal rates of the patients' reports has been removed from this window (this functionality is still available through the **Autoverification settings** option of the **Preferences** menu).

New *Type* column in the *Statistics* and *Statistics alarms* windows

To make the data easier to read and to use, in the new version of Valab a *Type* column in the tables of the *Statistics* and *Statistics alarms* windows now indicates the type for each test. This new feature is also present in the printout / export tables.

Displaying the entire Auto-Expert rules model of the parent test for duplicates of numerical tests

Following the extension of the Auto-Expert setup mechanisms to the original standard tests, the *Demographics* node previously present in the test setup window for numerical (quantitative) duplicate tests has been replaced by the *Expertise / Auto-Expert* node which displays the entire Auto-Expert rules model of the parent test.