BiPoint

newborn screening software

information booklet

What is Bipoint?

BiPoint is a web application for complete and efficient management of newborn screening process. The main aim of our solution is to provide a scalable platform to help each user involved, whether they are a neonatology nurse or a screening center administrative operator, in every phase and step of the diagnostic workflow.

A neonatology operator can access to the web application through a browser and use his own username and password to logon. He can enter any biographical data of the newborns and combine them with the barcode of paper card used to collect blood spots.
When the paper cards are sent by courier to the central laboratory for analysis, the tracking id can be entered so administrative users are able to track the dispatch.

In the screening laboratory, technicians can search each paper card data in the application using barcode number, they can accept or not the blood spots and then start the analysis process. Bipoint helps technicians during analysis providing working list and collecting results from instruments. Medical staff can so produce diagnosis or start second-tier tests when follow-up is needed; using Bipoint they can also request new blood spots to the nursery staff or invite parents of the infant to the screening center for further tests.
The nursery users can track analysis process for each newborn and read or download diagnosis report directly from Bipoint.
Our software provides warnings and alerts, for the administrative users, to monitor the paper cards unsent or not delivered. They can also monitor newborns under treatment protocol, share messages with nursery, create statistical reports.

Main functionalities:

- Users profiling

- Enter personal data and blood spot paper cards

- Dispatch, tracking and delivery

- Production process and results managment

- Diagnosis and follow-up

- Messaging system and alerts

- Statistical reporting system

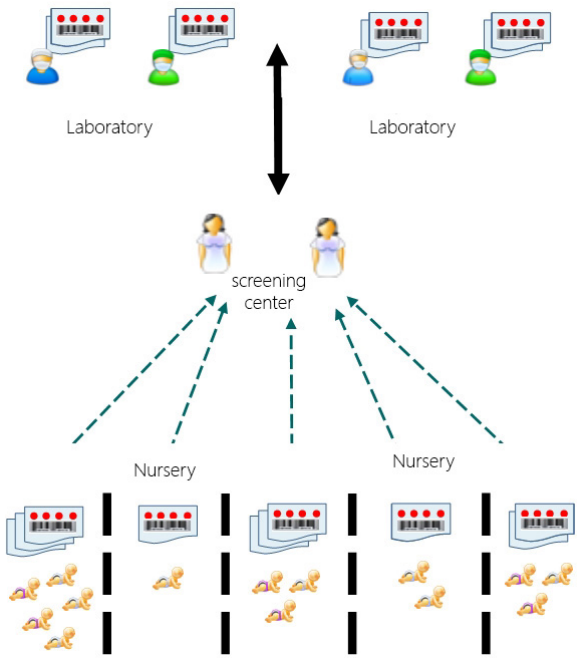
- Integration with instruments, LIMS and institutional birth registration systems

- Integration with CLIR (Collaborative Laboratory Integrated Reports) Mayo Clinic

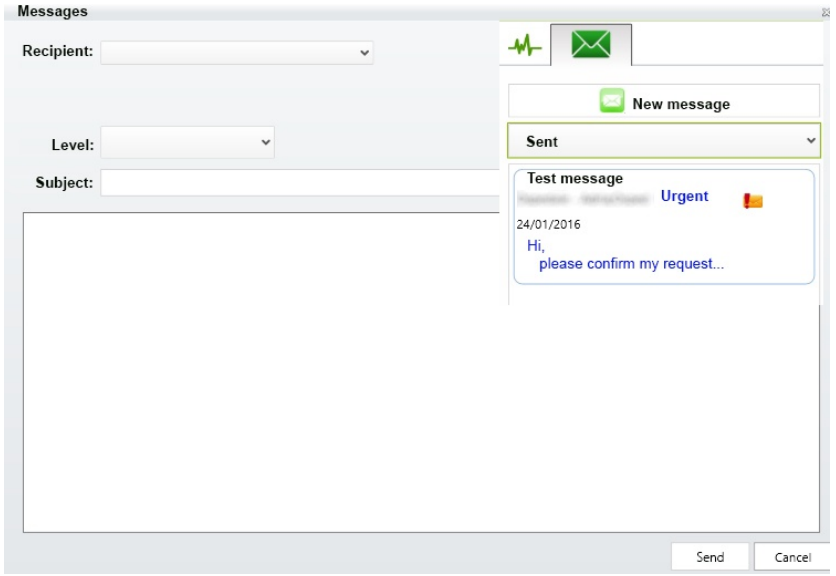
Users profiling

Bipoint provides a complete users profiling through roles (administratives user, doctors, laboratory technicians and nursery staff) for each different structure (neonatology, laboratories and screening centers).

Each user can read only related data of their own hospital/laboratory. Every action taken by the user in the software is tracked.



BiPoint provides an internal message system to help communicate between nursery and screening center.



Diagnostic process

Nursery

the user can:

- **Enter personal data**
- **Collect and send samples to the screening center**
- **Search and edit data**
- **Track samples shipments**
- **Take a new specimen from newborn if requested by screening center**
- **Check analysis state and results**
- **Create statistics and reports**
- **Exchange messages with the screening center**

Screening center

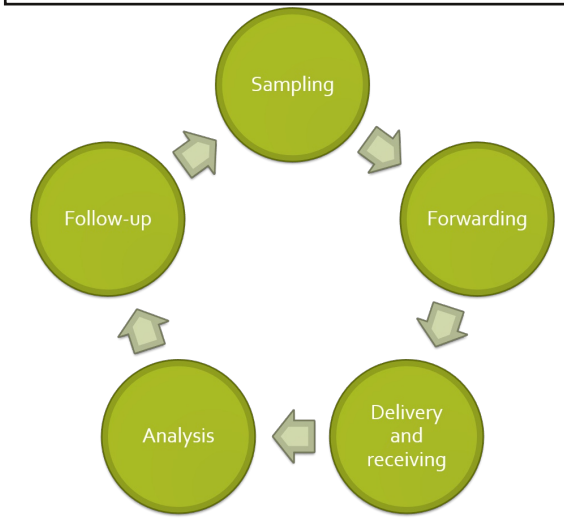
the user can:

- **Track samples shipment**
(shipments in delivery, report delayed paper cards)
- **Search and edit data**
- **Receive paper cards**
- **Send samples to the laboratory**
- **Track analysis status and results**
- **Call a new sample to the nursery**
(Retesting or Insufficent blood spot)
- **Create medical documents**
- **Create statistics and reports**
- **Exchange messages with the nursery staff**

Laboratory

the user can:

- **Create plates side by side with the puncher**
(to avoid error picking blood spots)
- **Send working list to instruments**
- **Collect results**
- **Repeat tests for positive results**
- **Ask for a retesting or new spots**
- **Start second-tier tests**
- **Produce diagnosis**
- **Create statistics and reports**
- **Choose cut-off range based on past tests**



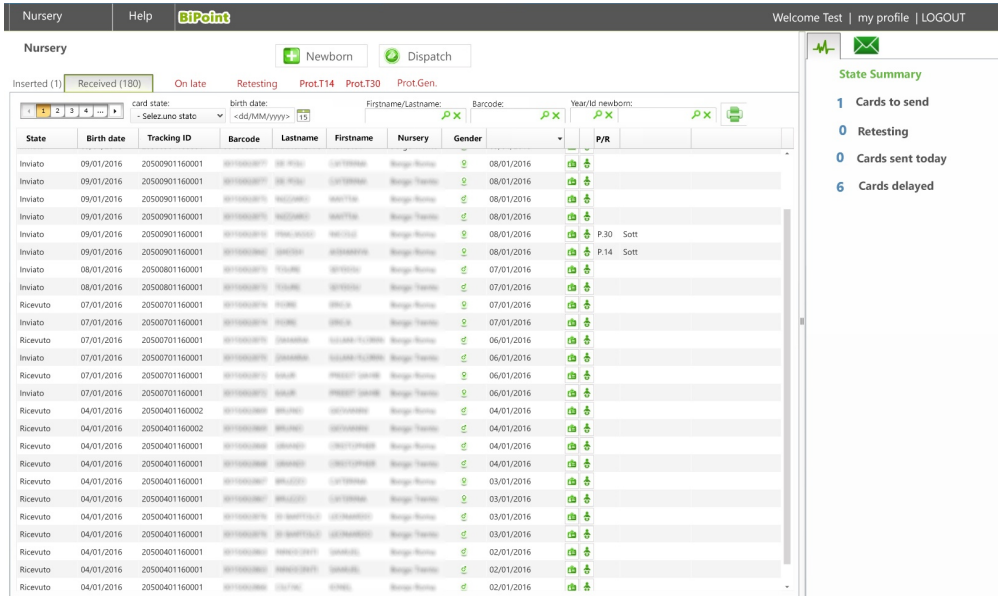
Nursery

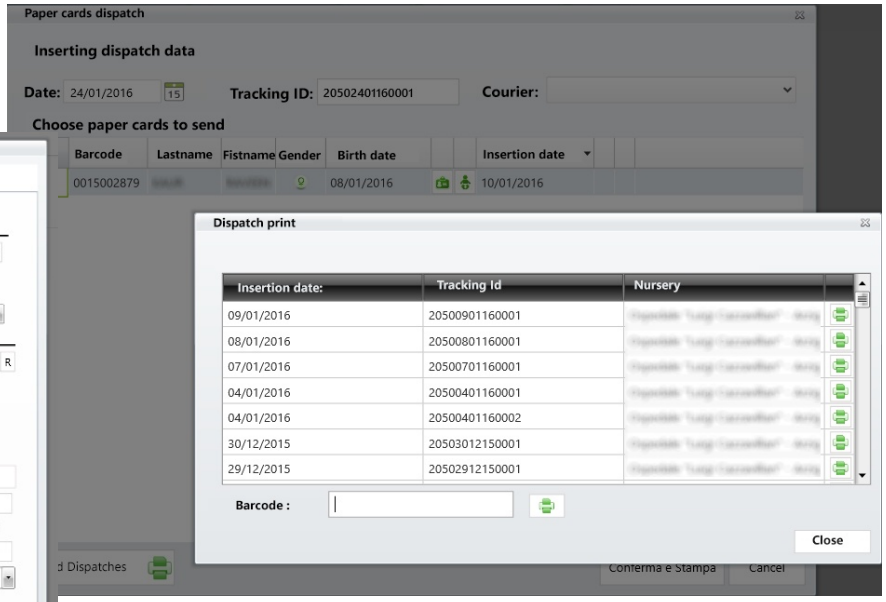
The user can enter newborn personal data and blood paper card data (id paper card, blood collecting date ecc.).

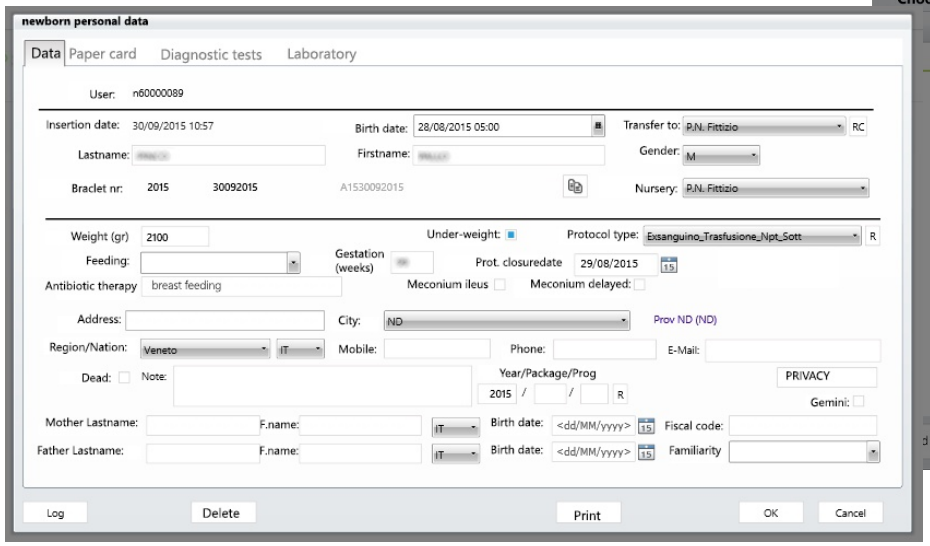
Bipoint provides an operating function to send cards to the screening, to insert the tracking id and to print a document to match it with the packages given to the courier.

When the packages are delivered at the screening center, administrative users can simply enter the tracking id to mark cards as "received". This step allows the checking of delayed cards and avoids losing cards and make sure all infants are being screened (the screening tests have to be taken within 48 hours from blood collecting date) because Bipoint shows alerts if a card is sent but not delivered within 3 days.

The user also receives retesting or new spot requests directly from laboratory or from screening center. During tests the user can check the state of each analysis and when the diagnosis is ready he can see results and download medical report from our platform.





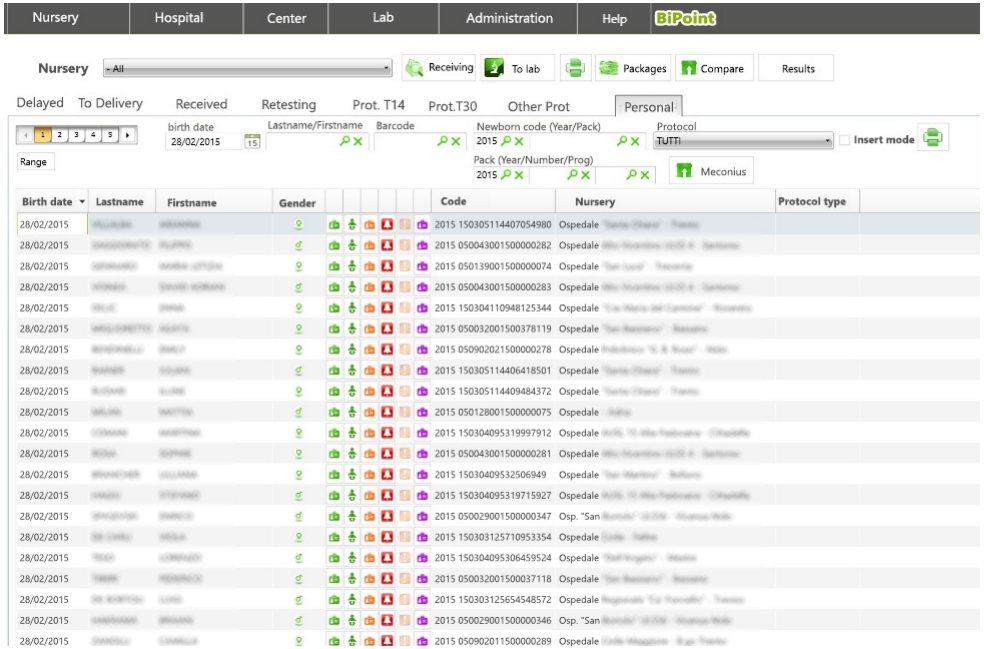


Screening Center

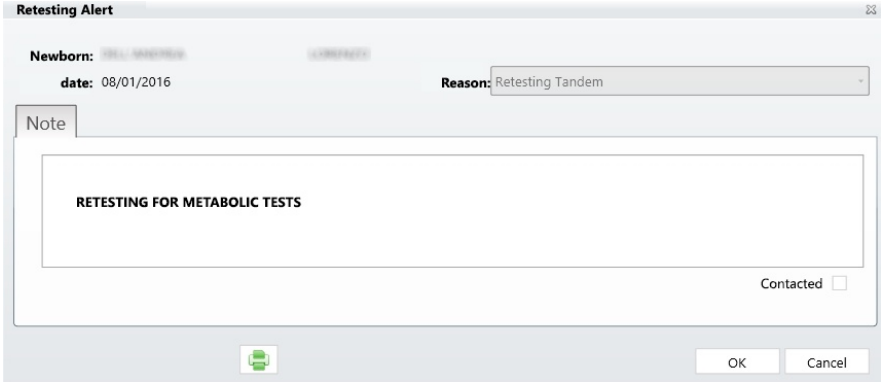
Bipoint helps users of screening center to interface with nursery staff efficiently and safely, minimizing communication by phone and monitoring all working process of blood spot paper cards.

An administrative user can:

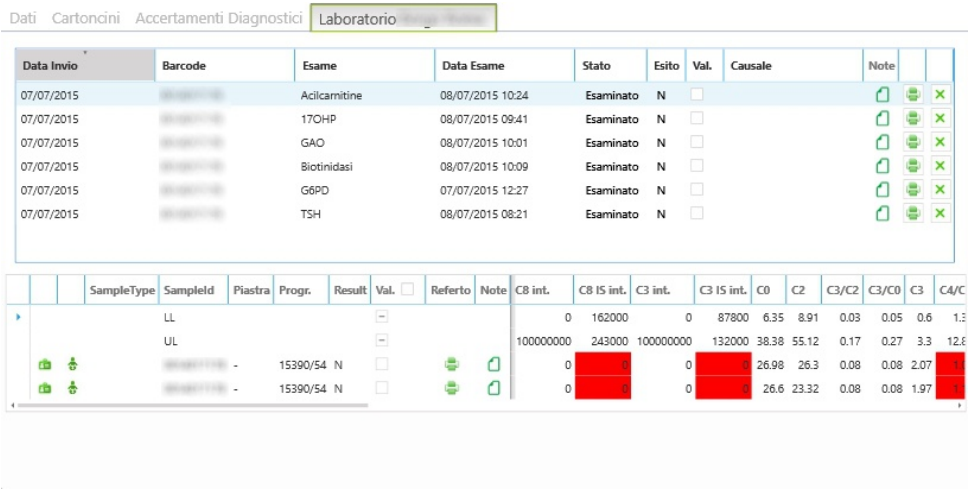
- read and edit personal data entered from nursery
- track delayed shipments and check all specimen in delivery
- monitor all newborns under protocol treatment (P14,P30,NTP, Blood-transfused)
- be helped to interface with nursery staff and family during follow-up

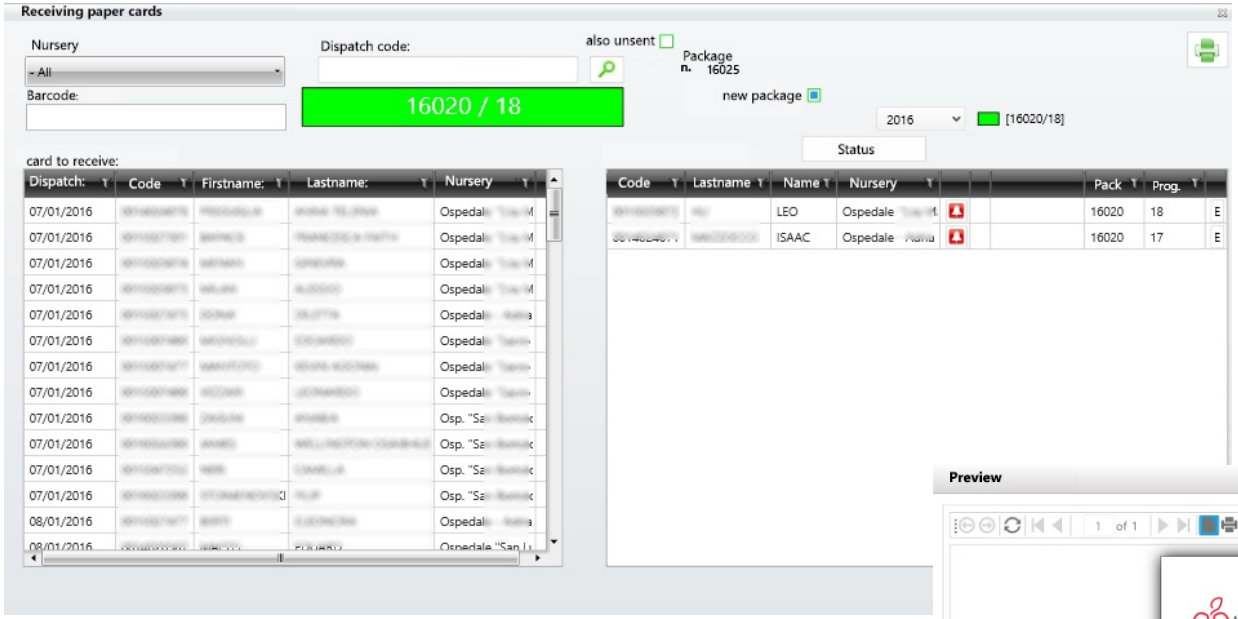


- Forward a request from laboratory to birth provider for a new specimen because it proved unsatisfactory or for retesting
- Manage Retesting requests (automatically sent and displayed at the nursery)

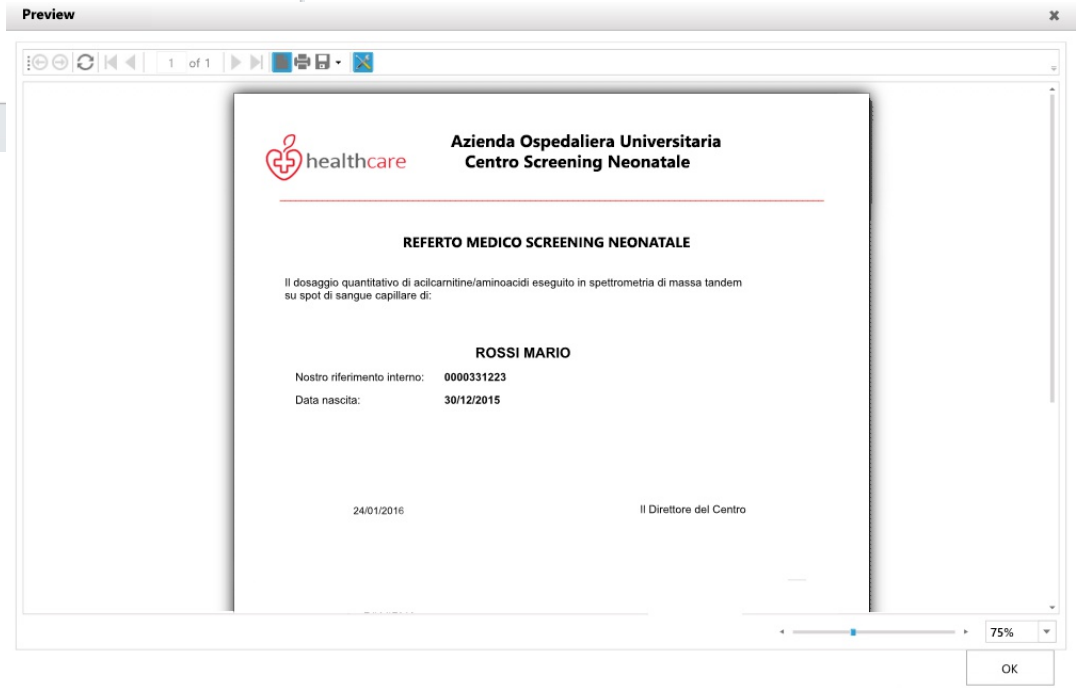


- Access analytical data and diagnoses





- Receiving cards sent from nurseries
- Manage production lines, forward samples to second-tier tests
- Manage other diagnostic results

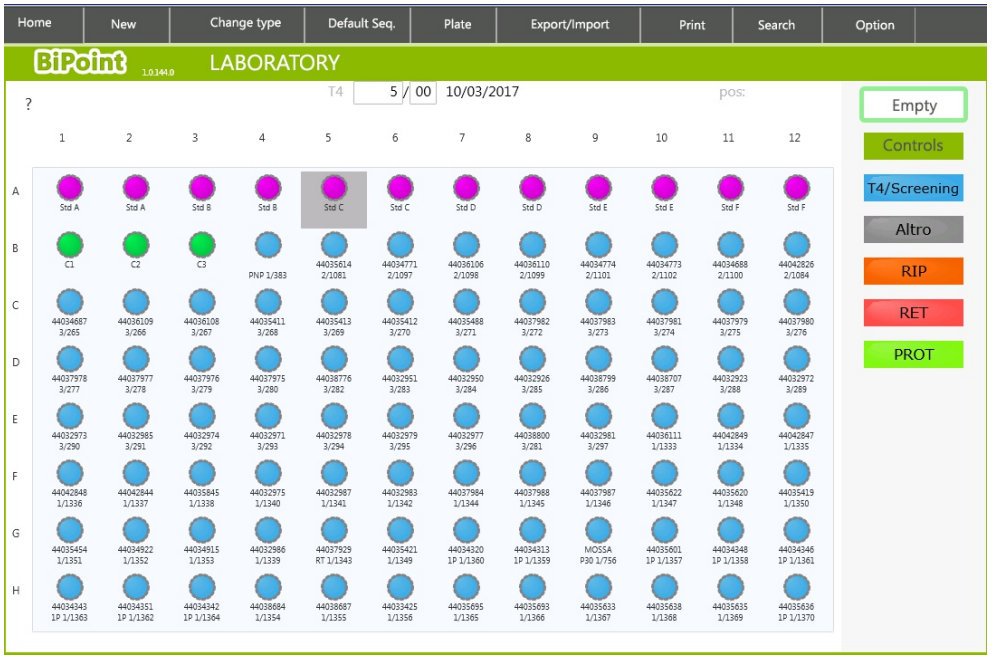


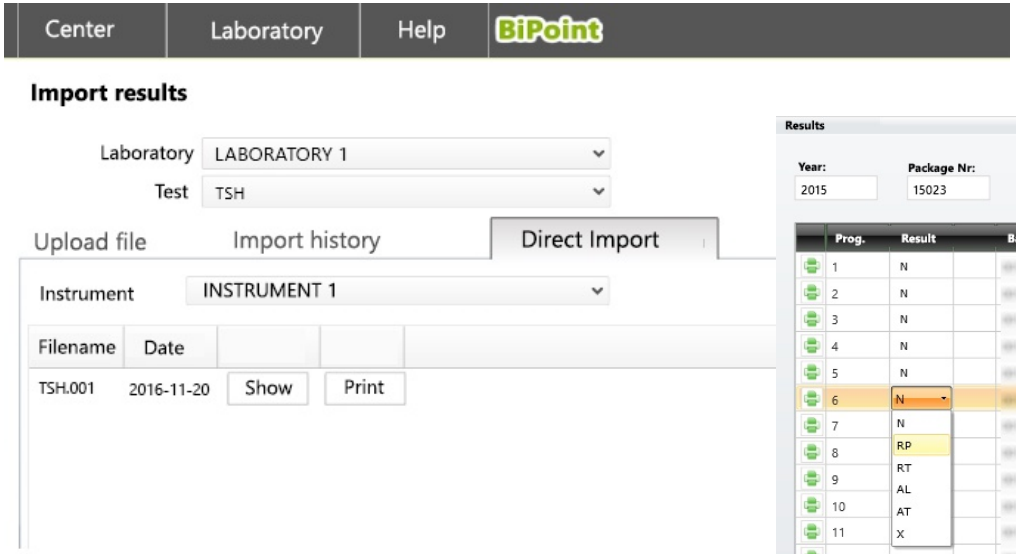
- Generate reports and related documentation
- Digital signing the document by the responsible clinical staff
- Forward the documentation to the birthplace or, if necessary, to the baby's family
- Create summary reports for archiving.
- Possibility of integration with replacement storage software

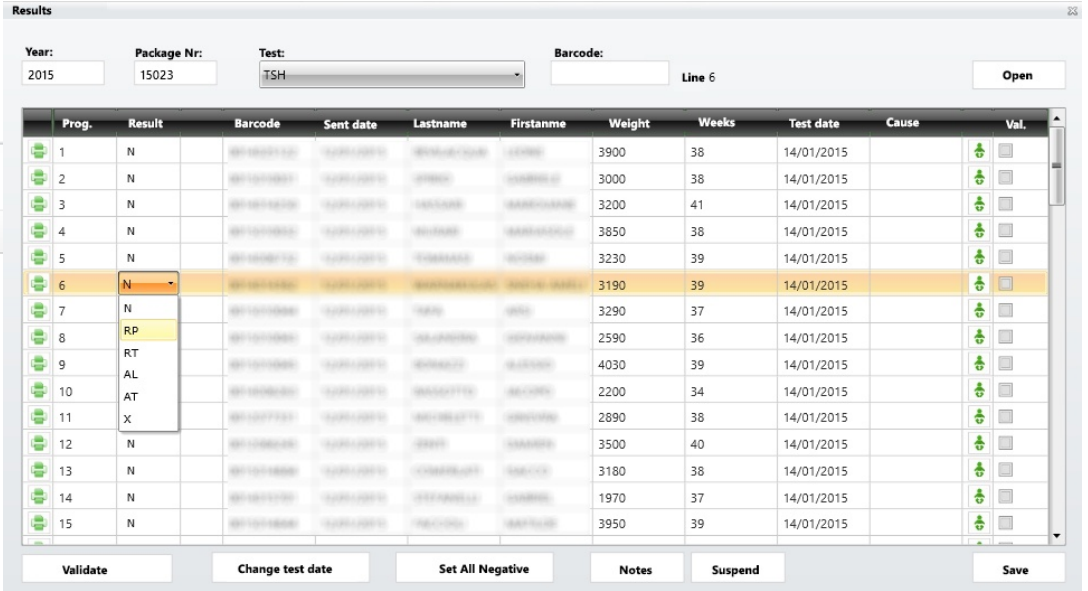
Laboratory

Bipoint helps technicians and biologists to execute tests and to collect results from instruments.
To execute the analsys process they can:

- create plates picking blood spot from paper cards syde-by-syde with the puncher
(Bipoint helps users to avoid mistakes through todo list and alerts)
- create the working list and send it to the instrument
- import test values from instruments
- repeat sample tests
- set diagnostic results
- request retesting or new blood spot



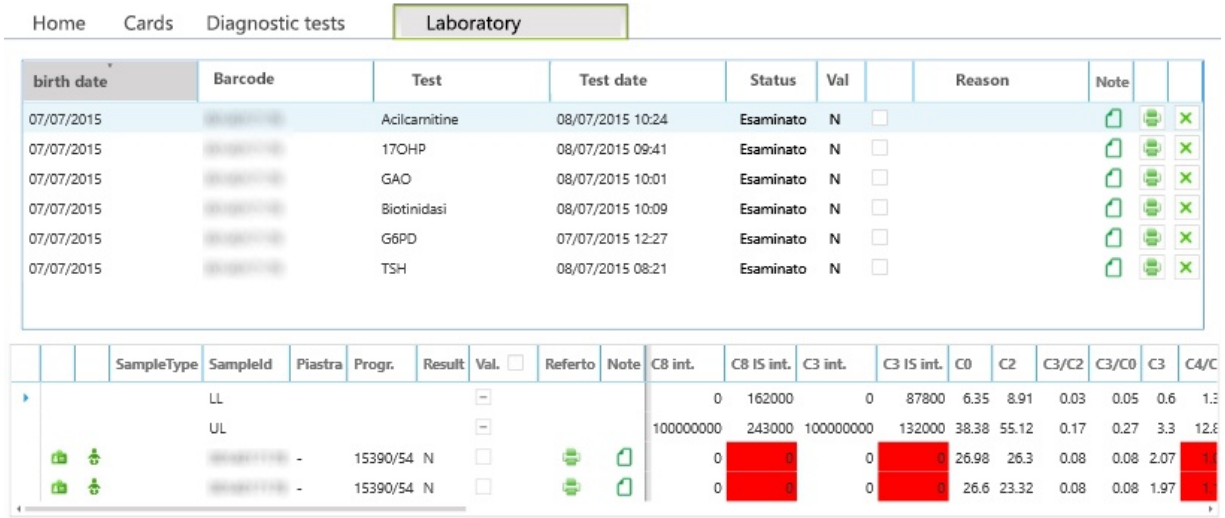




Bipoint can produce working lists in variuos formats (e.i. csv,text,xml,excel file etc.); Bipoint can also read results files directly on the instrument pc and import concentrations and tests values.

It can produce working lists and read results file from PerkinElmer Specimen Gate™, PerkinElmer GSP™ or PerkinElmer Autodelfia™

In Bipoint the laboratory processing is separated from diagnosis process: the role of the laboratory technician is separate from biologists and physicians role; technicians can produce work list and import results data but cannot make diagnosis; biologyst can instead access to the processing results, evaluate them based on cut-off ranges and newborn data, validate the results, repeat the test or request new samples and produce diagnosis.

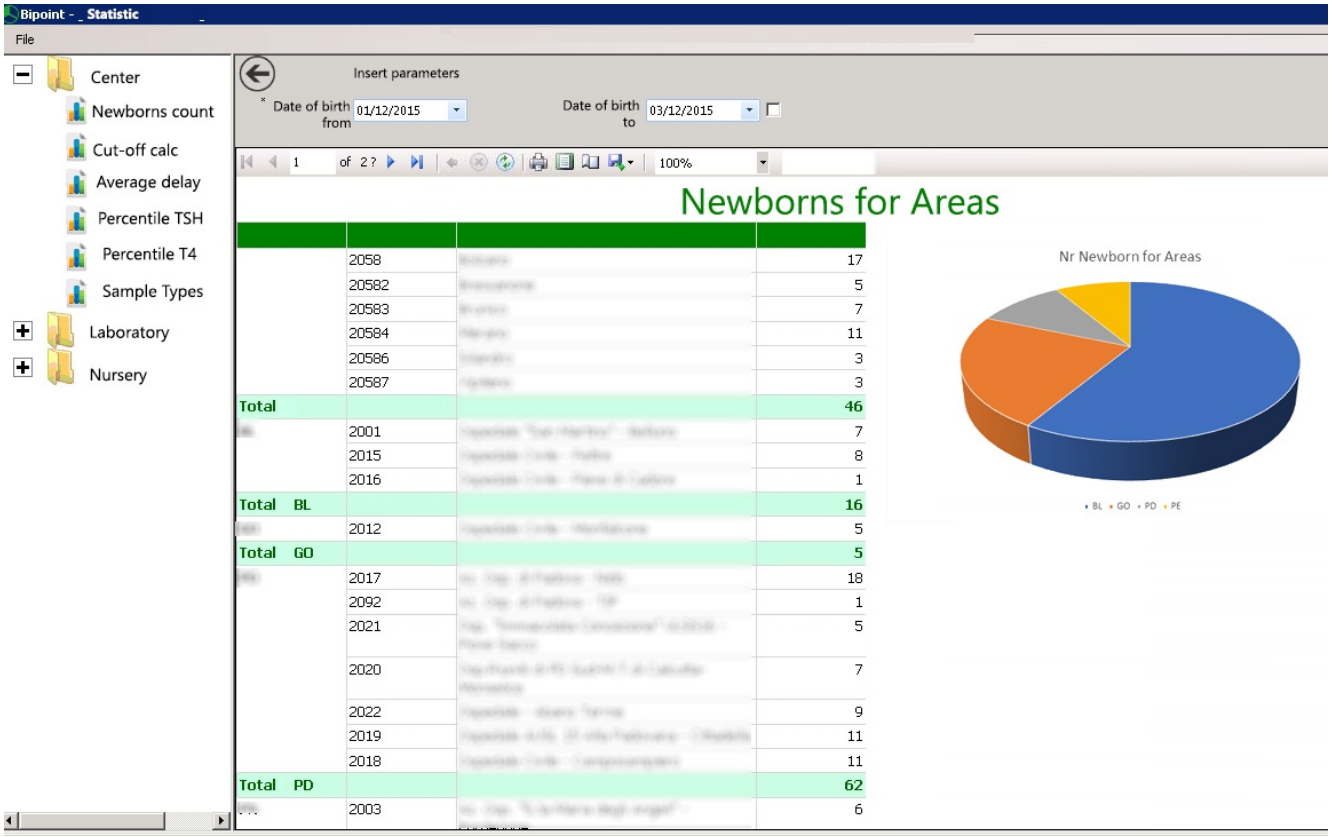


In Bipoint can share results with CLIR (Collaborative Laboratory Integrated Reports) from Mayo Clinic (clir.mayo.edu): data can be exported in csv format or can be directly transfered to Mayo webservice.

Reports and Statistics

Bipoint provides a reporting system and a statistics module.
It can export data in all common format files as Excel, Csv, Html etc.
Bipoint comes with several pre-existing statistical reports.

Bipoint also can also be interfaced with other statistical softwares, LIMS or hospital management system and institutional birth registration systems and quality control.



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	20584		11
	20586		3
	20587		3
Total			46
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	2015		8
	2016		1
Total BL			16
	2012		5
Total GO			5
	2017		18
	2092		1
	2021		5
	2020		7
	2022		9
	2019		11
	2018		11
Total PD			62
	2003		6

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