Infinicyt™ provides a list of very powerful tools for research and diagnosis of haematological diseases through flow cytometry data analysis. The features that most distinguish Infinicyt™ software from other software programs in the market are:

- **APS (Automatic Population Separator)** – Based on Principal Component Analysis, APS allows an automatic n-dimensional separation of all sample clusters. This diagram uses all sample parameters and always displays the best separation of clusters. A complete separation in clusters is especially useful when working with a high number of parameters and since APS also gives information of which parameters are the most important for cluster separation new analysis panels can be developed or improved.

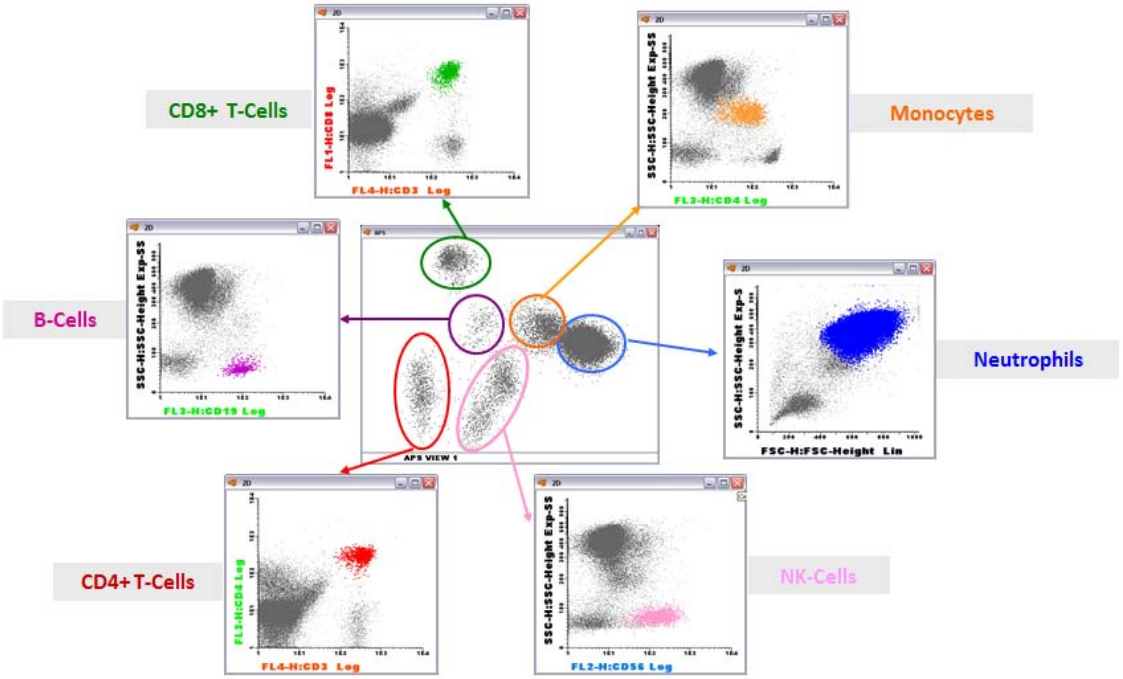

Figure 1 – APS diagram displays all events separated by principal component analysis (6 parameters) and allows a correct identification of 6 different populations.

- **File Merge Module** – Links in one single file information from different FCS files for a more complete and accurate analysis. A Parameter Band DotPlot can be used to evaluate all parameter at the same time. Infinicyt™ provides a quality control in order to verify if the selected population is equally represented in all files for the common parameters.

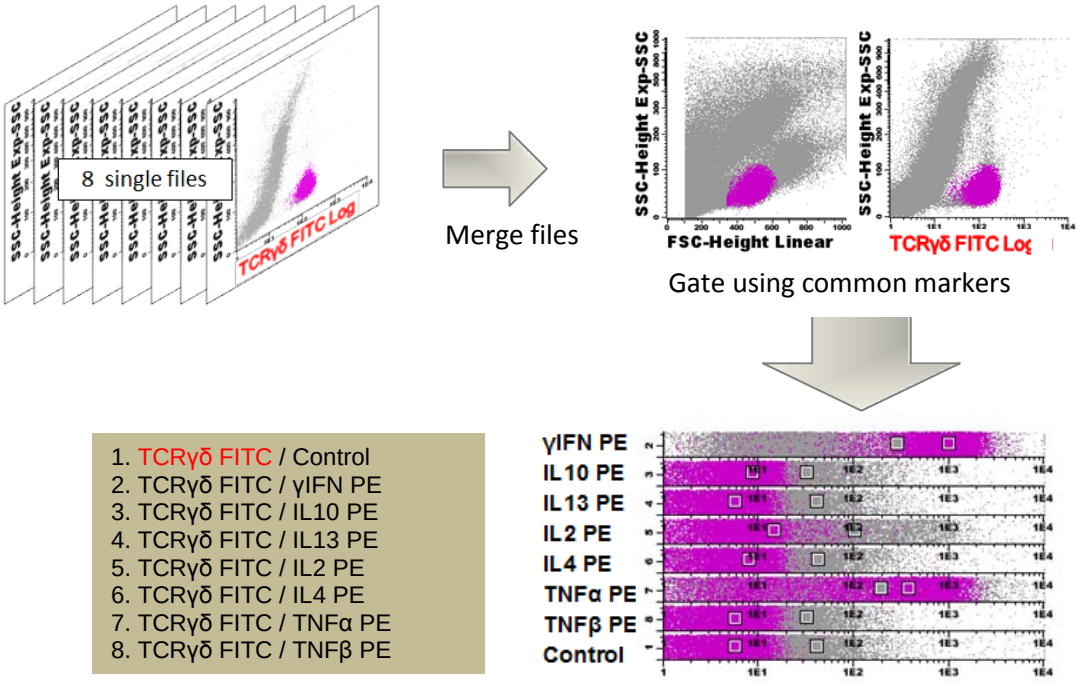

Figure 2 – A parameter band dot plot displays the complete results of an experiment composed of 8 single tubes. Purple population was selected in all tubes using common markers (SSC vs. FSC and SSC vs. TCRγδ).

- **Calculate Data Module** – Incorporates powerful algorithms that give precise and reliable calculation of markers expression independently of which tube they were measured. Integrates information of different aliquots into a same file so that any parameter can be compared easily with another independently of the aliquot where it was measured. Calculate Data is to be used for cells that present the same immunophenotype (already validated for certain EuroFlow™ panels – www.euroflow.org).

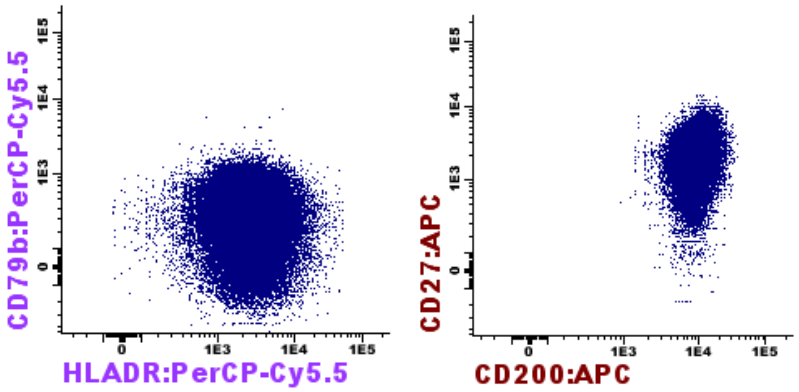

Figure 3 – Normal 2D dot plots displaying information of calculated data for clonal B-cells. Parameters displayed within each diagram were measured in the same fluorescence in different aliquots.

- **Reference Image** – Groups of events are saved as reference for future comparisons. Reference images can be displayed in form of dots or density lines and are always associated with its corresponding statistical data. Reference image main applications are comparing normal or abnormal marker expression, comparing maturation patterns, evaluating minimal residual disease (MRD) and comparing control samples with test samples in research laboratories. For MRD evaluation several reference images can be saved at different time points to have a complete monitoring of patient evolution.

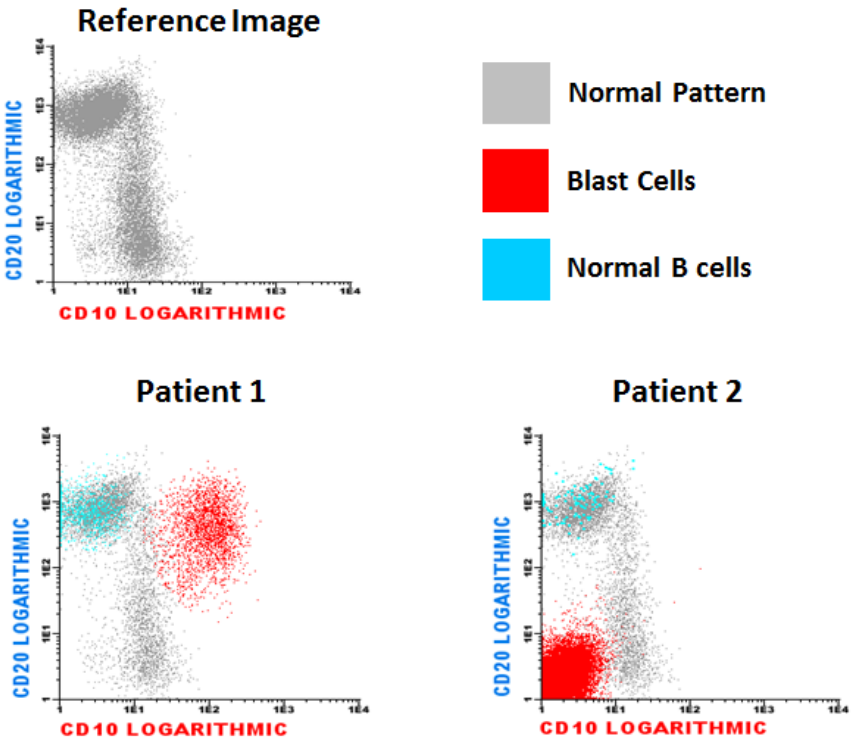

Figure 4 – Normal B-cells maturation pattern (grey dots) is saved as a Reference Image and compared with normal B-cells (blue dots) and blast cells (red dots) from two other patients.

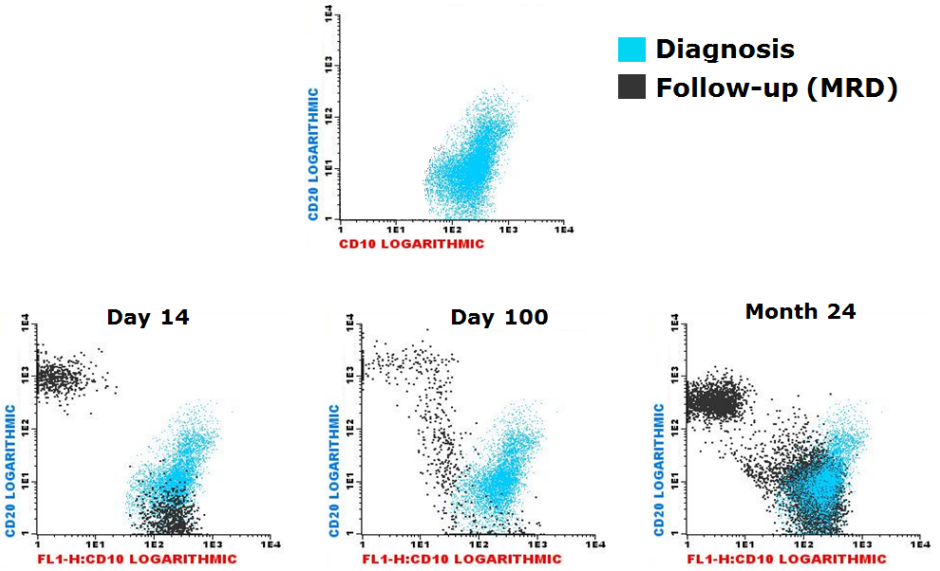

Figure 5 – Reference image of a blast population of a patient sample at diagnosis (blue dots) is compared with several stages of patient follow-up (grey dots).

- **Compass** – Powerful tool that allows a user to create a database with different reference groups (files) and subsequently compare a new case study (new file) against the database. Compass was built to give very intuitive results just by observing the Compass pointer. In this way, a user can verify quickly similarities of a new case study with the ones already stored in a database. Comparative APS diagrams can be also displayed to compare our case study against each database case. Databases are created by the user according to their particular experience and can be shared with other users as long as the same panel and procedures are used.

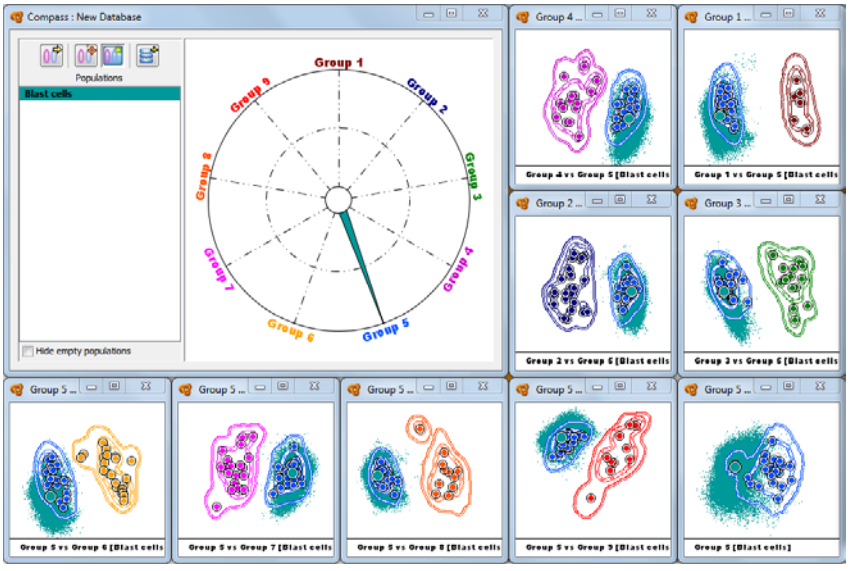

Figure 6 – Compass diagram with relevant comparative APS for group assignation.

- **Maturation** – A valuable new tool, Maturation, has been included in Infinicyt which will be paramount in the study of maturation disorders such as myelodysplastic syndromes (MDS). This tool when using a Maturation database quantitatively assesses in multiple markers the stage of blockage of a dysplasia.

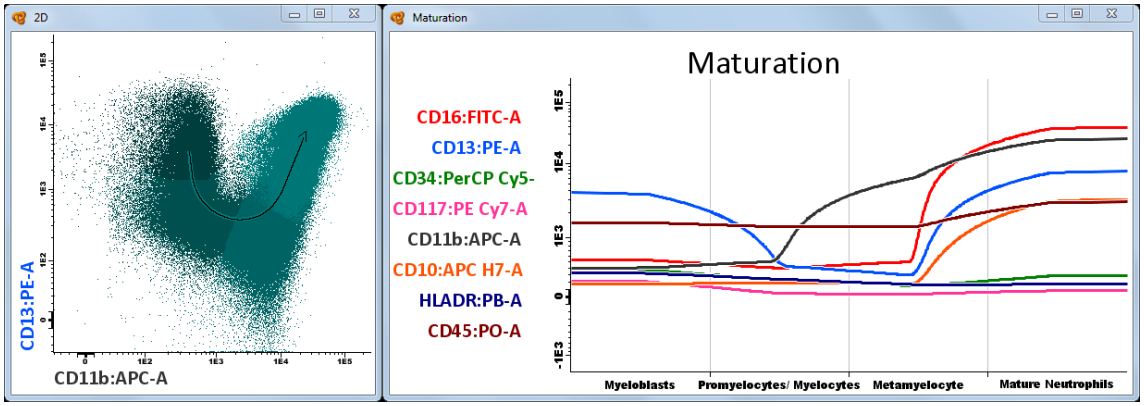

Figure 7 – Maturation path of neutrophils and Maturation diagram representing all sample parameters.

- **Batch Analysis** –Tool that automates the analysis of multiple files making high-throughput analysis easier and less monotonous. Different actions can be configured at the same time for a certain group of files: apply analysis strategies, export statistics, export reports, export files with a different configuration, apply compensation and compare files with a selected database using Compass. Several Batches can be configured to use with a diverse type of files.

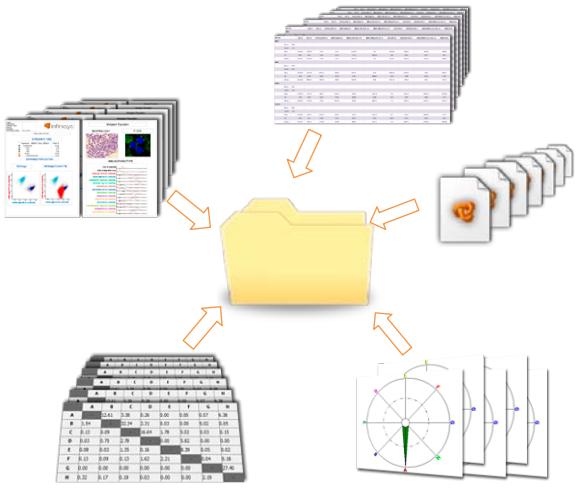

Figure 8 – All files generated in a Batch Analysis process are saved in a single output folder.

Besides these main features other Infinicyt™ characteristics worth mentioning are:

Validation

Infinicyt™ was developed within the EuroFlow™ project where 12 groups of highly qualified and prestigious European cytometrists intended to standardise all procedures within flow cytometry leukaemia and lymphoma diagnosis. Therefore, every feature and function of Infinicyt™ has been validated by the best flow cytometry laboratories in Europe and is specialised to cover the needs of any basic or advanced flow cytometry analysis. For more information consult www.euroflow.org.

Technical Assets

Infinicyt™ can read FCS files from any type of cytometer (Beckman Coulter, BD Biosciences, Dako, Miltenyi, Accuri, etc.) without restrictions in processing files with high number of events.

Diagrams and Representations

Infinicyt™ has multiple types of high definition diagrams (APS, DotPlots, Histograms, Multidimensional, 3D Diagrams, Box Plots, Parameter Band Plots, etc.). From those, Parameter Band Plots have a special relevance since evaluation of a sample complete immunophenotype can be performed in a single diagram. Infinicyt™ also has Box Plots with which immediate statistical comparison can be made without the need to export it to statistical software.

Using special visibility configurations in any of the above mentioned diagrams, the user can select exactly which population is to be displayed at any point of analysis. Populations can also be displayed with different representations including population median and mean values.

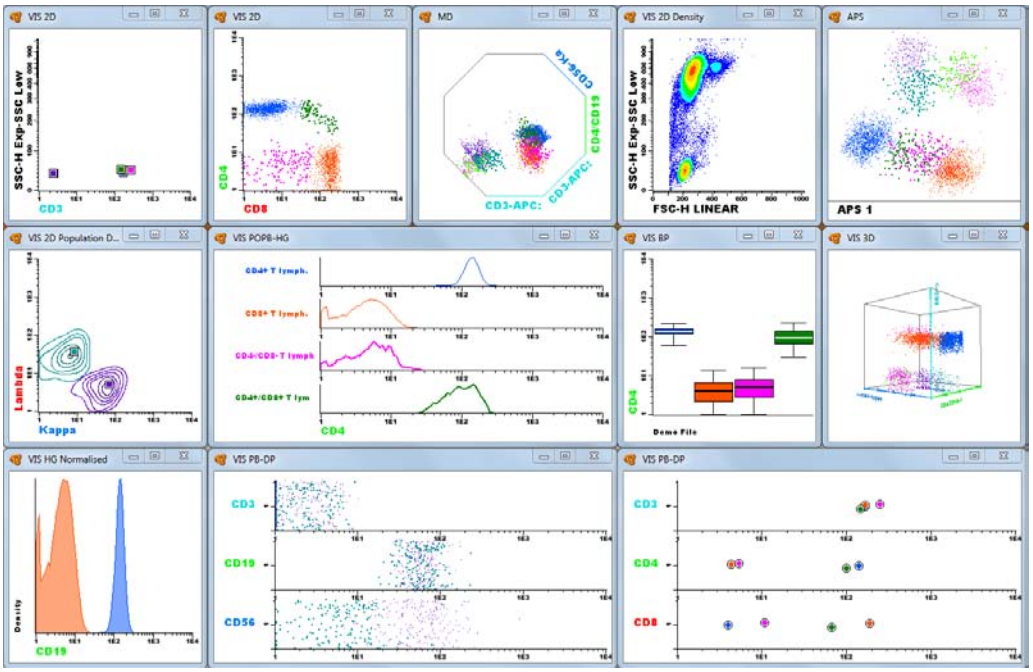

Figure 9 –Infinicyt™ has several diagrams and event representations for accurate and complete analysis.

Other Data Analysis Properties

- The user only needs to build once a profile (template) with the most appropriate diagrams, statistics and report for a particular type of sample and apply it every time a similar sample is analysed. There are no limitations on the number of profiles that can be created. Organise profiles within Infinicyt using “Profile Manager”.
- Files compensations can be saved in a profile and applied easily to other files.
- Users are not limited to the statistical parameters usually available in flow cytometry software (Mean, Geometric Mean, CV, SD, etc.). Many statistical data can be added to any analysis. Also, statistical data (virtual parameters) created by the user can be displayed and compared with file parameters in normal DotPlots.
- A new tool, Zoom, also allows studying populations in detail.