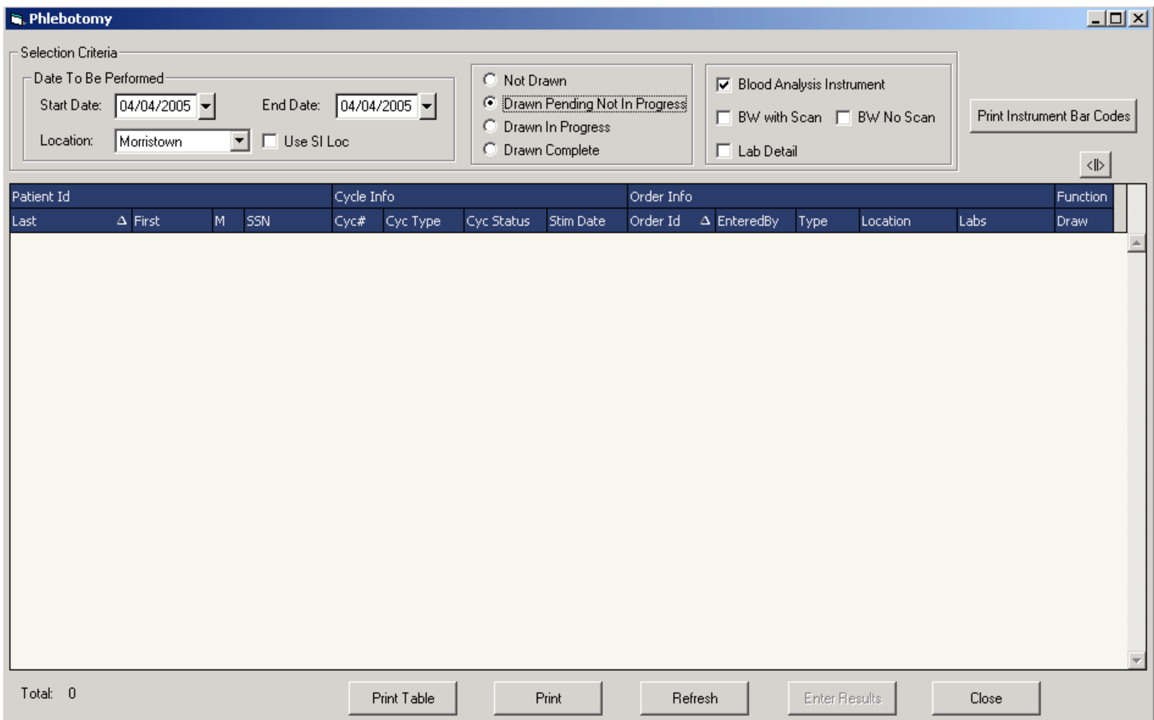
Phlebotomy

User Instruction

The Phlebotomy feature in RESource is used in conjunction with a blood analysis instrument such as the Immulite. Together, they enable the use of bar code labels and limit the amount of manual data entry that is required. To access the Phlebotomy screen go to the Tools menu and select Phlebotomy.

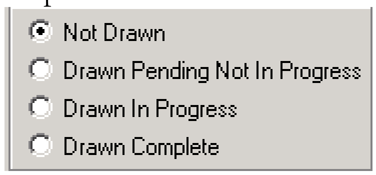


Selection Criteria

As criteria are selected from the fields provided, a patient list will appear. This patient list can simply be viewed and/or printed, it can help to manage patient flow, it allows labs to be marked as drawn, and it facilitates bar code creation and result entry.

The Start Date and End Date fields represent the lab order date (date to be performed) and will default to the current date – clicking on their corresponding dropdown arrows will display calendars allowing you to select any desired date range. The Location field represents the stim location of the stim row containing the lab order(s). Checking off the Use SI Loc checkbox will apply the Location selection to the patients' sign in location instead of the stim location. The SI Loc option requires that the patient has signed in before she will appear in the list.

There are four lab status options to choose from:



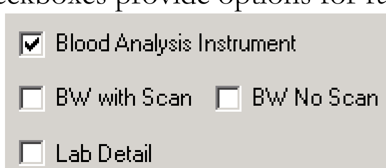
Not Drawn – lab orders that have not been marked as Drawn (lab orders can be marked as Drawn by checking the Drawn checkbox in the actual order, or by checking Draw in the Phlebotomy screen which is discussed later in this section)

Drawn Pending Not In Progress – lab orders that have been marked as Drawn but have not yet been placed in the Immulite machine.

Drawn In Progress – lab orders that have been marked as Drawn and are being processed

Drawn Complete – lab orders that have been marked as Drawn and results are available

The additional four checkboxes provide options for further filtering of the patient list:



Blood Analysis Instrument – displays only lab orders that contain labs run on the Immulite. At RMA, only the stim labs are processed on the Immulite: E2, P4, LH, FSH, BHCG and also TSH.

BW with Scan – displays patients/orders that also contain an ultrasound order for the given date

BW No Scan – displays only patients/orders that do not contain an ultrasound order for the given date

Lab Detail – displays the individual labs ordered for each patient. By default, only one row will appear per lab order for each patient, with the individual orders represented with the letter B in the Type column

Type	Location	Labs
B B B B B B	Morristown	
B B	Morristown	
B	Morristown	
B	Morristown	

Type	Location	Labs
B	Morristown	Day3 LH
B	Morristown	Day3 FSH
B	Morristown	Prolactin-Fastin
B	Morristown	P
B	Morristown	Day3 E2
B	Morristown	TSH
B	Morristown	E2
B	Morristown	P
B	Morristown	TSH
B	Morristown	P

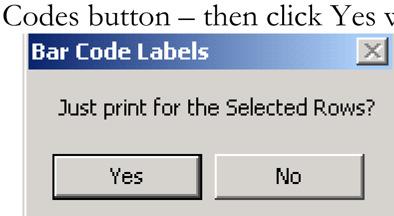
Bar Code Labels

Once criteria have been entered, and the appropriate patient list appears, bar code labels can be generated. Usually, labels are generated for patients who have not yet had their blood drawn – once drawn, the labels are placed on the corresponding blood tubes. The bar codes work in conjunction with your designated blood analysis instrument (Immulite) – the instrument reads the patient and the labs to be processed from the bar code.

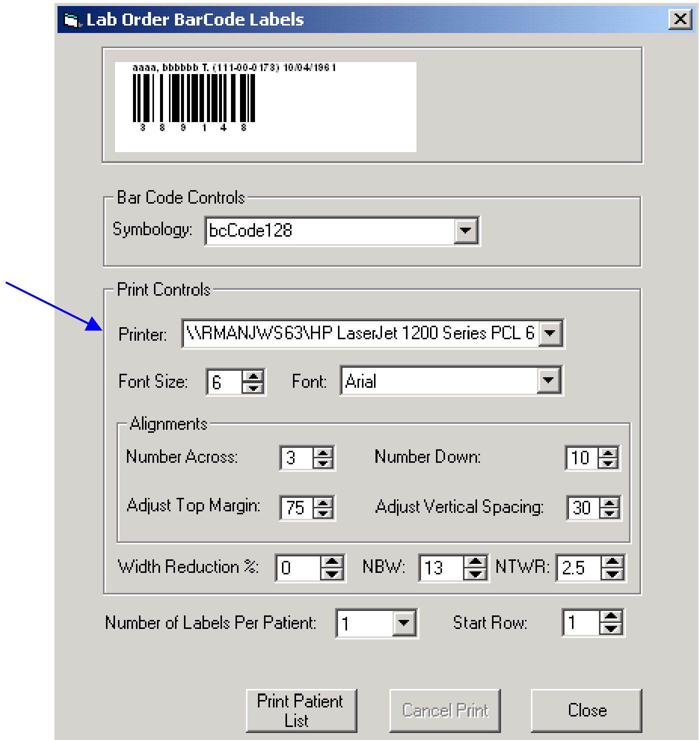
To generate bar code labels:

1 – use the criteria options available to generate a patient list. Note that you must have the Blood Analysis Instrument option checked off – bar codes can only be generated for labs that the instrument has been set up for.

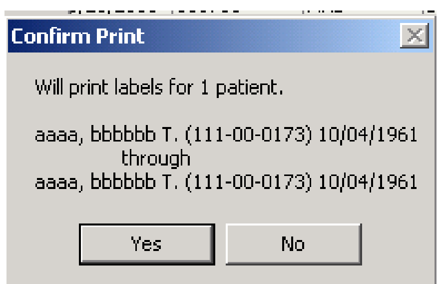
2 – click the Print Instrument Bar Codes button. A Bar Code Labels prompt will appear – click No if you want to print labels for the entire patient list. If you only want to print labels for one patient, select that patient in the list prior to clicking the Print Instrument Bar Codes button – then click Yes when the prompt appears.



3 – the Lab Order BarCode Labels screen will appear. A sample label will appear at the top – select the desired printer from the Printer field, ignore all other fields (they will be explained in the Editing Lab Order Bar Code Labels section that follows) and click the Print Patient List button at the bottom of the screen.



4 – when the Confirm Print button appears, click Yes



Editing Lab Order Bar Code Labels

The Lab Order Bar Code Labels screen allows editing of the print/layout settings:

Symbology – indicates the bar code format that is generated. This should be left at the default setting unless otherwise instructed.

Printer – the printer the labels will print to

Font Size – indicates the size of the font/text printed on the labels. This should be left at the default setting unless otherwise instructed.

Font – indicates the font type printed on the labels. This should be left at the default setting unless otherwise instructed.

Number Across – indicates the number of labels horizontally on the label sheet. This should be left at the default setting unless otherwise instructed.

Number Down – indicates the number of labels vertically on the label sheet. This should be left at the default setting unless otherwise instructed.

Adjust Top Margin – adjusts where the text will print from the top of the label. Positive values will shift the top margin down and negative value will shift the top margin up on the label. This should be left at the default setting unless otherwise instructed.

Adjust Vertical Spacing – adjusts the spacing between each row of printed labels on the label sheet. Positive values increase the spacing and negative values decrease the spacing. This could be used if rows below the first row are not lining up properly. This should be left at the default setting unless otherwise instructed.

Width Reduction % - reduces or increases the width of all solid bars in the barcode. Positive values increase the width and negative values decrease the width. This setting is normally used when printing on an unstable surface (wet ink, glass or other). It allows compensation for shrinkage as the ink dries or bleeding. Note that this value is considered to be a percentage of the NBW setting. For example, if the NWB is 0 (default = 13 mils) and the Width Reduction value is set to 25%, the bar widths will be reduced by 25% of 13 mils, or 3.25 mils. This should be left at the default setting unless otherwise instructed.

NBW – sets the width of the narrowest bar in a bar code. All other bar and spacing widths in a bar code are determined from this value. The default is 0, which internally sets the width to be 13 mils. The value can be changed to compensate for differing bar code reader and printer resolutions. This should be left at the default setting unless otherwise instructed.

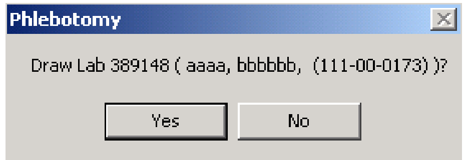
NTWR - applies only to bar code symbologies (formats) of Code 39, Interleaved 2 or 5 and CodaBar. Determines the ratio between the Wide and Narrow elements of the bars and spaces in the bar code. This should be left at the default setting unless otherwise instructed.

Number of Labels per Patient – indicates the number of labels that will be printed for each patient. This should be left at the default setting unless otherwise instructed.

Start Row – indicates the label row to begin printing. For example, if you have a sheet of labels where the first 3 rows of labels have already been used, you would select 4, to begin printing on the 4^{th} row of labels. The purpose of this is to help eliminate having to waste label sheets that have been partially used.

Draw and Enter Results

If bar code labels are generated first thing in the morning, they will be ready for use when the patients sign in for blood work. When the blood work is drawn the appropriate bar code label should be placed on the tube and the lab order should be marked as drawn. To mark a lab order as drawn in the Phlebotomy screen, select the patient in the patient list and check the Draw checkbox – select Yes to the prompt that appears.



When a lab order has been marked as Drawn it will appear in the Drawn Pending Not In Progress list – the Enter Results button at the bottom of the screen will also be enabled when this patient/lab order is selected. If the blood analysis instrument has been programmed to automatically return the results to RESource there is no need for you to manually enter results using the Enter Results button. As labs are processed and completed in the Immulite, they will appear in its LIS screen – they can then be sent to RESource. (For full instructions on the use of the Immulite see an administrator in the endocrine lab.) Once the results have been sent to RESource they will appear in RESource's LIS screen. From this screen they are entered (posted) into the patients' stim sheets.

To Post lab results using the LIS:

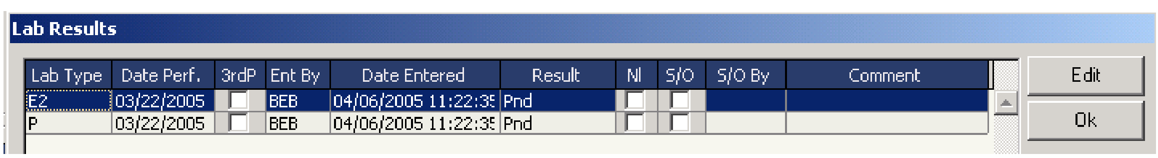
1 – select LIS from the Tools menu. The LIS screen will appear.

2 – Enter the desired date range – both the start date and end date will default to the current date.

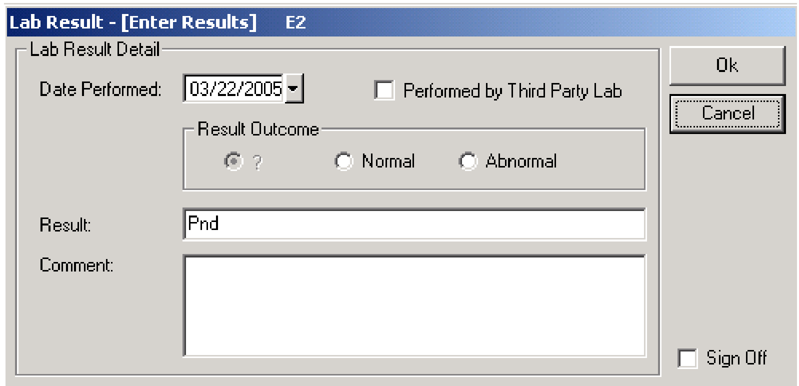
3 - Click Post All and choose Yes to the prompt that appears. All results will be posted to the corresponding lab orders/stim sheets

To Enter lab results manually:

1 – select the patient from the Phlebotomy screen and click Enter Results. The Lab Results screen will appear with each lab in the order displayed.



2 – select the individual lab and click Edit. The Lab Result [Enter Results] window will appear.



3 – enter the result in the Result field and select either Normal or Abnormal. Enter any additional comments in the Comment field and click OK. The lab results will now appear in the actual lab order within the stim sheet as well as in the Lab Log.

Printing

Besides printing the bar code labels there are two other print options available on the Phlebotomy screen: Print Table and Print.

Print Table

The Print Table option will print out the displayed patient list, in the sort order that is currently applied – when clicked, an image of the current table/grid will print to your default printer. Like many other grid-type lists in RESource, the patient list in the Phlebotomy screen can be sorted by any field by clicking on the corresponding column header.

Print

The Print option will print out the displayed patient list in alphabetical order, in a report-type format. Each patient is listed with her current cycle summary details and each individual lab ordered for the given date. If results have been entered, they will also appear on the report with the corresponding entry date and the user who entered them.