

### Opening the Study:

Double click on the Sandhill Applications icon on the desktop. Click 'Analysis'.



Click 'Select Patient': The path to find the patient file is: C:\Sandhill\Patients\GER



Overview the study and make any necessary corrections. Run AutoSCAN.



#### Distal Baseline Impedance:

Change Time to 10 minutes.

Turn on Default Ruler and Select Point Data.



Select an area between 2 swallows with a stable impedance baseline. Triple click. Observe the data in the distal 2 impedance channels. The impedance average of the distal 2 channels must be above 500 ohms in order to continue. (If the average value of the two distal impedance value is less than 500, the impedance is unreliable the study should be evaluated as a pH only study.)



Optional: If desired, log the data: Click 'Log the Results' in the Default Ruler. The data can then be accessed by clicking on 'Report' on the toolbar and selecting 'View Log'

Default Ru	ler 💌		
Point Data	- <u>11</u>		
Amplitude Log th	ne Results		
2 Amplitude	3336.2		
3 Amplitude	3182.4		
4 Amplitude	3724.9		
5 Amplitude	Goto View	Ranges Analyze	Report
6 Amplitude	000	Create Report	
7 Amplitude		View/Edit Report	
8 Amplitude		Delete Report	
Amplitude Duration Time 1/9:0	Default	View Log	
	nt Data	Delete Log	



Turn off the Default Ruler, and turn on the Analysis Tool. Turn on ClouseVIEW so that both waveforms and ClouseVIEW are displayed. Low impedance values indicate bolus presence in the same way as a drop in the waveform impedance. The purple color in the ClouseVIEW reflects impedance below the set value.





In most patients, the impedance value of refluxate is below 400 ohms whereas a dry swallow (saliva) has a much higher impedance value. Using the ClouseVIEW Adjust the impedance color value to 400 ohms so that refluxate will be viewed as purple and dry swallows will show as white. The pH will be reflected in ClouseVIEW as a gradient of blue for pH above 4 and a gradient of red for pH below 4.



The impedance value of air is typically 10,000 ohms and will be displayed on the ClouseVIEW as blue.



## Analyze:



#### Acid Reflux ClouseVIEW



#### Non-Acid Reflux Waveform



### Non-Acid Reflux ClouseVIEW



### Analyze:



Air Swallow Waveform

#### Air Swallow ClouseVIEW



Supragastric Belch Waveform

Supragastric Belch ClouseVIEW





# Sandhill University... Innovators in Clinical Education

The objective of Sandhill University is to provide clinical users with the knowledge and skills necessary to effectively acquire and analyze High Resolution Impedance-Manometry studies, impedance/pH reflux monitoring studies and anorectal manometry studies.

- Sandhill University Online Courses
- Webinars
- Cybercoaching
- Sandhill SuperVision

As the global leader in G.I. diagnostics, Sandhill Scientific continues to offer state-of-theart clinical education courses throughout the world. To learn about courses in your area of the globe, please contact a Sandhill representative.





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