

Office Medic (Orbit Spirometer) How-To Guide

Office Medic Settings

These are Office Medic settings that are important for the user to know.

- Options > Spirometry... > General > Spirometry Standard

This setting allows the user to configure which Spirometry Standard to use.

The screenshot shows the 'Spirometry Options' dialog box with the 'General' tab selected. The 'Spirometry Standard' section is highlighted with a red box. It contains three radio button options: 'ATS/ERS (2019)' (selected), 'ATS/ERS (2005)', and 'BTS-NICE (2004-05)'. Other visible options include 'Incentive' (Graph with predicted effort), 'Interpretation' (Narrative Interpretation selected, ATS/ERS (2005) selected), 'Units' (L/min selected), and 'Home Use' (unchecked). A 'Restore Defaults' button is also present.

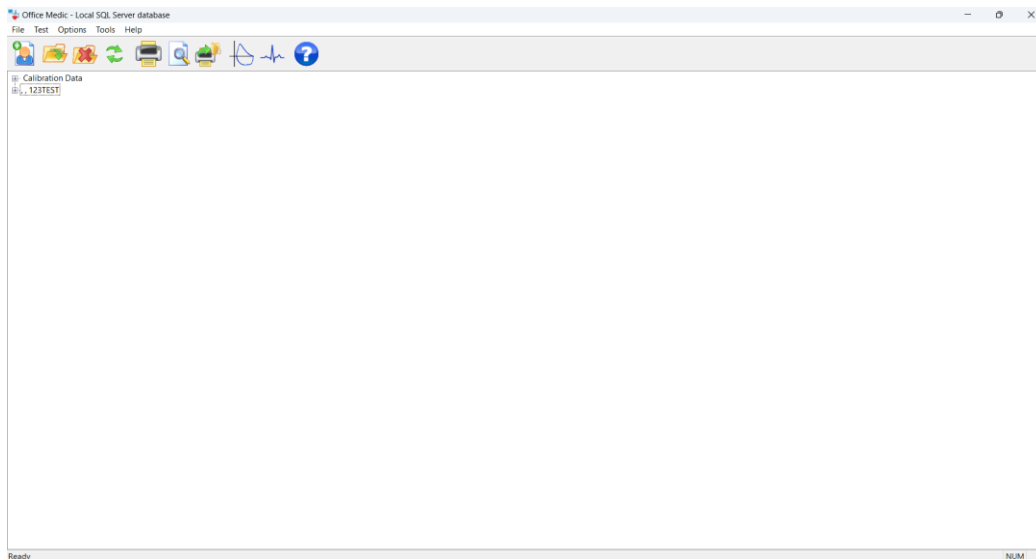
- Options > Spirometry... > Predictors

This setting allows the user to configure which predictors to use for FVC, SVC and MVV.

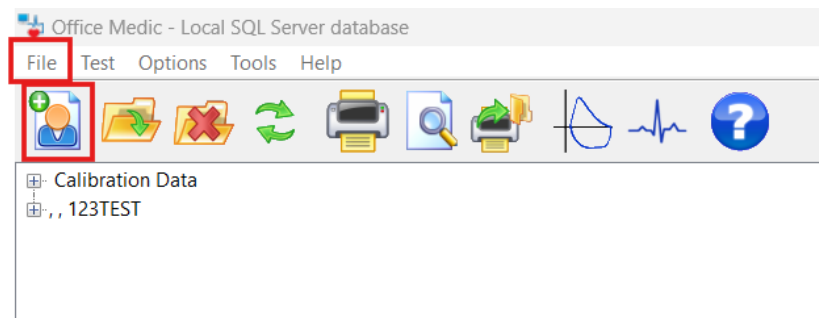
The screenshot shows the 'Spirometry Options' dialog box with the 'Predictors' tab selected. It is divided into two main sections: 'FVC/SVC Predictors' and 'MVV Predictors'.
 - **FVC/SVC Predictors:** Adult First Choice (GLI-G (Race-Neutral)), Adult Second Choice (GLI 2012), Pediatric First Choice (GLI-G (Race-Neutral)), Pediatric Second Choice (GLI 2012).
 - **MVV Predictors:** Adult Predictor (Cherniack '72), Pediatric Predictor (Zapletal '87).
 - **Settings:** 'If the subject is >= 18 years old, use the Adult predictor equation.' Below this, there are input fields for '% for Black Subjects' (0) and '% for Asian subjects' (0).
 A 'Restore Defaults' button is located at the bottom right of the dialog.

Performing a Spirometry Test for the First Time (using ATS 2019 Standards)

1. Connect the Orbit Spirometer to the desktop, laptop, or tablet via the USB cable.
2. Launch Office Medic. When Office Medic opens, the screen below appears:



3. Create a new patient by clicking the “New Patient” icon or by clicking “File” > “New”.

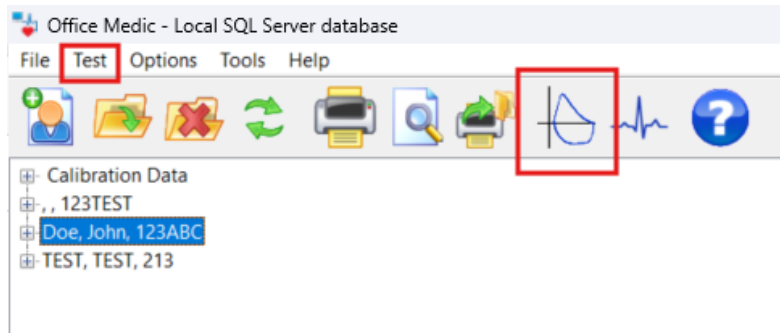


4. Enter in all known patient information (mandatory patient information is denoted with an asterisk) and click “OK”.

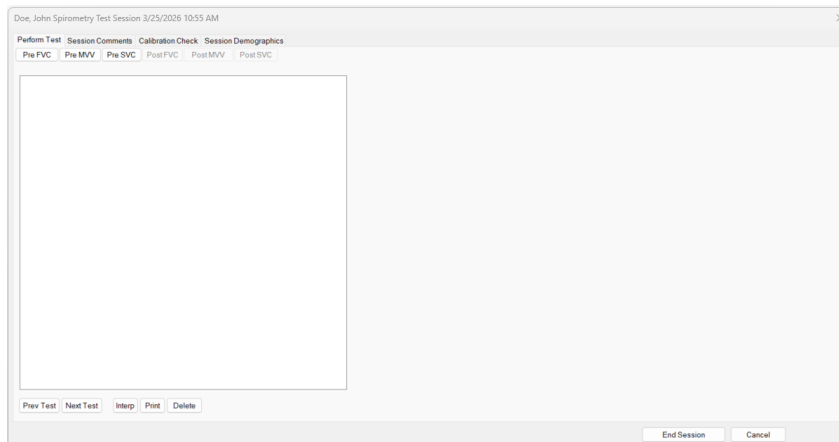
Patient Information ✕

Last Name*	First Name*	Account #*	ID #
<input type="text" value="Doe"/>	<input type="text" value="John"/>	<input type="text" value="123ABC"/>	<input type="text" value="123ABC"/>
Address		Phone Number	
<input type="text" value="123 Main Street"/>		<input type="text" value="123-456-7890"/>	
Height(cm)*	Weight(kg)	Gender*	Race*
<input type="text" value="123"/>	<input type="text" value="123"/>	<input type="text" value="Male"/>	<input type="text" value="Not listed"/>
Birth Date *	Age	Smoking-Pack Years	* Required
<input type="text" value="3/24/1950"/>	76 yr	<input type="text"/>	<input type="button" value="OK"/>
			<input type="button" value="Cancel"/>

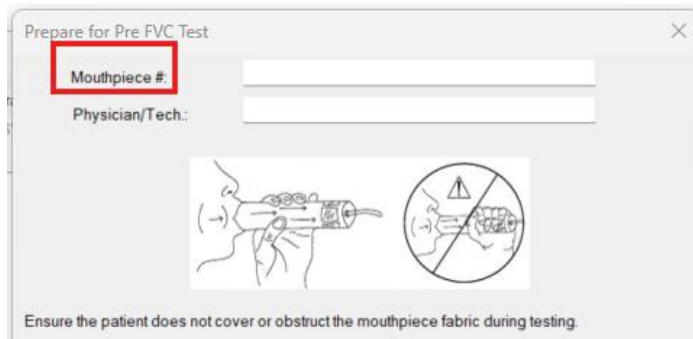
- The newly created patient will now appear in the main patient trunk database. Highlight the patient and click the “Spirometry” button or click “Test” > “Spirometry...” to start a spirometry session.



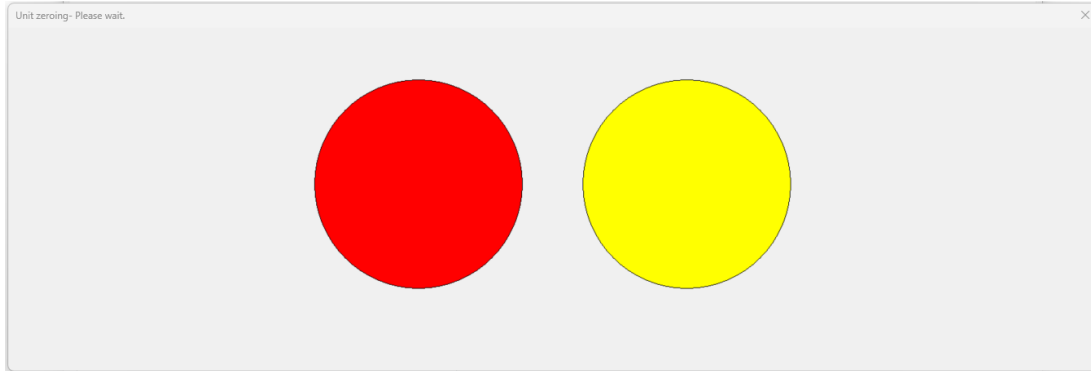
- The user will be taken to the screen below. Click on the type of spirometry test the user would like to perform. (Pre FVC, Pre MVV, Pre SVC). In this How-To-Guide, FVC tests will be chosen.



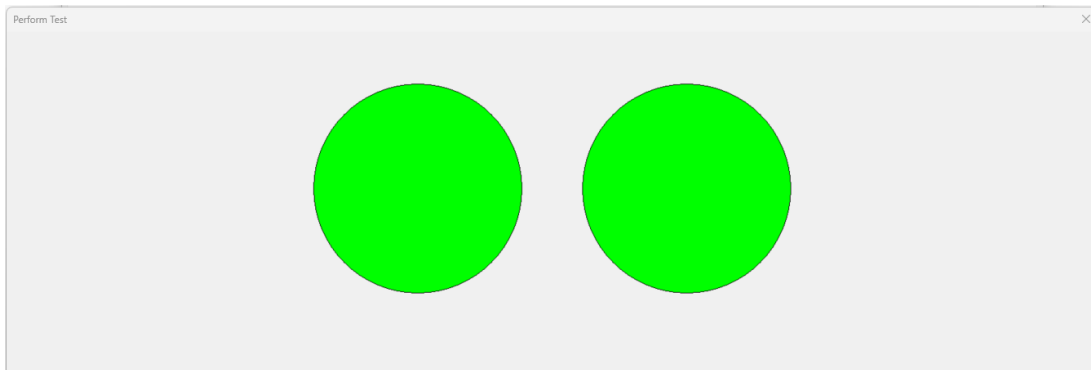
- The user must enter in the mouthpiece serial number (8-digit number located on the white plastic mouthpiece). Click “OK” to begin the test maneuver.



- The user will begin to see flashing red and yellow lights which indicate that the device is zeroing. Make sure the user does not have the mouthpiece in their mouth or cause any disturbances to the device/pressure tube/mouthpiece as this can prolong the zeroing phase.



- Once the device has successfully zeroed, both of the lights will turn green which indicates that the test can begin. Instruct and encourage the patient to perform the spirometry test to the best of their ability. (i.e. For a FVC Test, the user should take a deep breath and then forcefully and completely exhale much as possible into the mouthpiece)



10. Once the test has concluded, the user will be taken to the screen below. If the user agrees with the acceptability and usability criteria, they may click “Yes”. If the user disagrees with the acceptability and usability criteria, they may click “No (Edit)” to configure which criteria are designated as met.

00:07 Approve results below?

First Test Recorded: Provisionally Meets EOFF Criteria
Repeat tests recommended for confirmation

Acceptability and Usability Criteria for FVC and FEV1: Verification Required (7)

System-Validated Acceptability Criteria

- Must have BEV $\leq 5\%$ of FVC or 0.100L, whichever is greater
- Must have no evidence of a faulty zero-flow setting
- Must achieve one of the three EOFF indicators
- Must have FVC - FVC $\leq 0.100L$ or 5% of FVC, which is greater, if the maximal inspiration after EOFF is greater than FVC

Technician-Verified Acceptability Criteria "Default set to criteria met by the system"

- Must have no cough in the first second of expiration. For children aged 6 years or younger must have at least 0.75 seconds of expiration without cough for acceptable or usable measurement of FEV0.75
- Must have no glottic closure in the first second of expiration. For children aged 6 years or younger must have at least 0.75 seconds of expiration without glottic closure for acceptable or usable measurement of FEV0.75
- Must have no glottic closure after 1 s of expiration
- Must have no evidence of obstructed mouthpiece or spirometer
- Must have no evidence of a leak

11. Once approving the acceptability and usability criteria results, the user will be taken to the screen below. The user will be able to review the volume graphs, z-scores, pre-test session grade and the measured values.

Doe, John Spirometry Test Session 3/25/2026 11:08 AM

Perform Test | Session Comments | Calibration Check | Session Demographics

Pre FVC | Pre MVV | Pre SVC | Post FVC | Post MVV | Post SVC

Parameter	Pred.	LLN	Z-Score	Result	% Pred.
FVC (L)	1.88 (Gg)	1.47	8.46	4.05	215.9%
FEV1 (L)	1.75 (Gg)	1.37	8.29	3.47	197.8%
FEV1/FVC	0.92 (Gg)	0.80	-0.94	0.86	93.1%
FEV6 (L)				4.05	
FEV1/FEV6				0.86	
FEV0.5 (L)				2.56	
FEV3 (L)				4.05	
FEV3/FVC				1.00	
PEFR (L/min)				365.16	
PEFT (s)				0.10	
PEF25% (L/min)				323.82	
PEF50% (L/min)				278.52	
PEF75% (L/min)				111.50	
PEF25-75% (L/min)				232.85	
FIVC (L)				3.95	
FIV0.5 (L)				1.81	
FIV1 (L)				3.92	
FIV3 (L)				3.95	
FIV1/FIVC				0.99	
FIV3/FIVC				1.00	
PIFR (L/min)				293.76	
PIF50% (L/min)				280.14	
PIF25-75% (L/min)				282.24	
PIF2-1.2 (L/min)				249.42	
FVC/FIVC				1.03	
Ext. Vol. (L)				0.04	
FET (s)				2.40	
EOTV (L)				0.10	

Pre Test Session Grade: FEV1 - E, FVC - E

Z-Score Pictogram

FVC: LLN Pred. ULN

FEV1: LLN Pred. ULN

FEV1/FVC: LLN Pred. ULN

Buttons: Prev Test, Next Test, Interp, Print, Delete, End Session, Cancel

12. According to ATS 2019 Spirometry Standards, it is recommended to perform a minimum of three test maneuvers for both pre and post-test sessions. Click “Pre FVC” to perform additional pre-test maneuvers.

Doe, John Spirometry Test Session 3/25/2026 11:08 AM

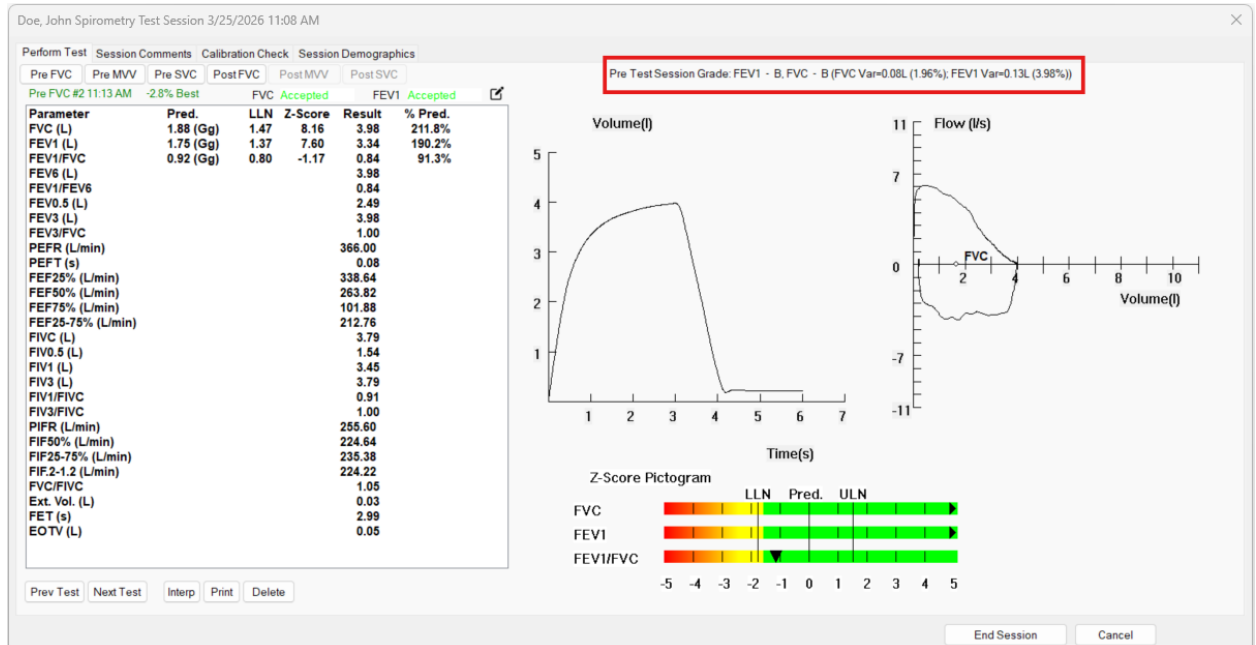
Perform Test Session Comments Calibration Check Session Demographics

Pre FVC Pre MVV Pre SVC Post FVC Post MVV Post SVC

Pre FVC #2 11:13 AM -2.8% Best FVC Accepted FEV1 Accepted

Parameter	Pred.	LLN	Z-Score	Result	% Pred.
FVC (L)	1.88 (Gg)	1.47	8.16	3.98	211.8%
FEV1 (L)	1.75 (Gg)	1.37	7.60	3.34	190.2%
FEV1/FVC	0.92 (Gg)	0.80	-1.17	0.84	91.3%
FEV6 (L)				3.98	
FEV1/FEV6				0.84	
FEV0.5 (L)				2.49	
FEV3 (L)				3.98	
FEV3/FVC				1.00	
PEFR (L/min)				366.00	
PEFT (s)				0.08	
FEF25% (L/min)				338.64	
FEF50% (L/min)				263.82	
FEF75% (L/min)				101.88	
FEF25-75% (L/min)				212.76	
FIVC (L)				3.79	
FIV0.5 (L)				1.54	
FIV1 (L)				3.45	
FIV3 (L)				3.79	
FIV1/FIVC				0.91	
FIV3/FIVC				1.00	
PIFR (L/min)				255.60	
FIF50% (L/min)				224.64	
FIF25-75% (L/min)				235.38	
FIF2-1.2 (L/min)				224.22	
FVC/FIVC				1.05	
Ext. Vol. (L)				0.03	
FET (s)				2.99	
EOTV (L)				0.05	

13. After performing additional pre-test maneuvers, the user will observe that there is now a percentage variability reported. When there are more than two pre-test maneuvers performed, the variability will be calculated from two of the best pre-test maneuvers.



14. After performing a minimum of three pre-test maneuvers and establishing an average baseline value, the user can perform post-test maneuvers as necessary. Post test maneuvers are commonly used to observe the effectiveness of medications such as bronchodilators. Click “Post FVC” to begin a post-test session.

Doe, John Spirometry Test Session 3/25/2026 11:08 AM

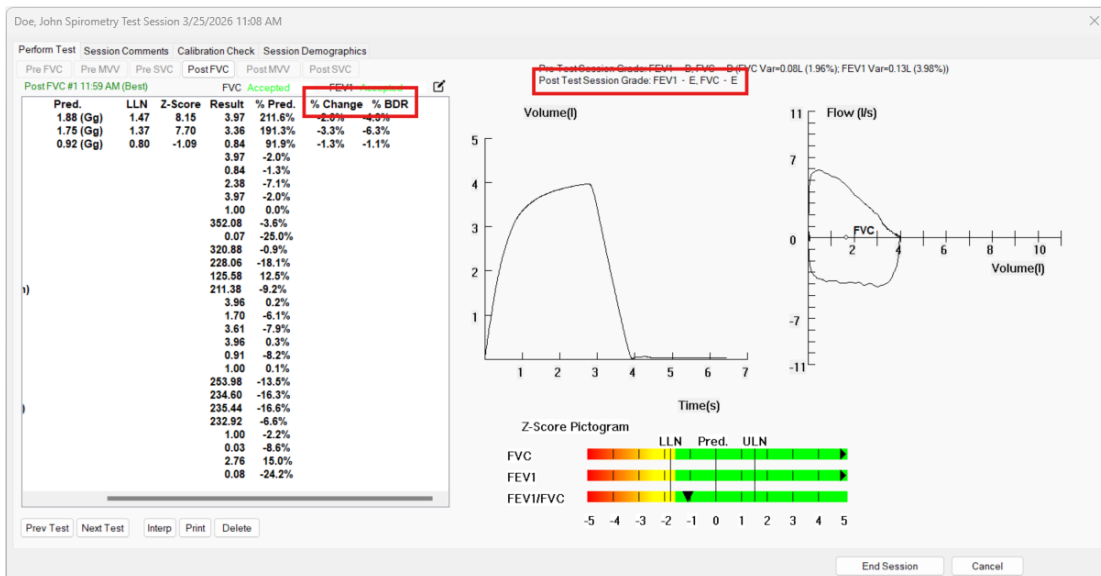
Perform Test | Session Comments | Calibration Check | Session Demographics

Pre FVC | Pre MVV | Pre SVC | **Post FVC** | Post MVV | Post SVC

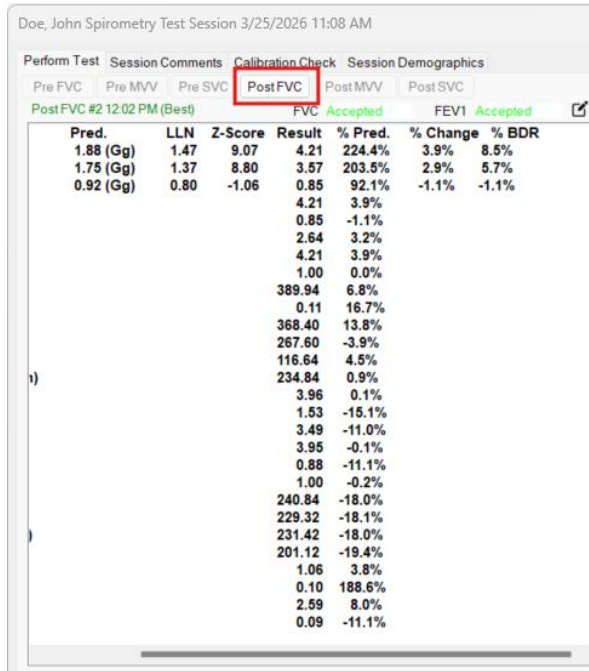
Pre FVC #2 11:13 AM -2.8% Best FVC Accepted FEV1 Accepted

Parameter	Pred.	LLN	Z-Score	Result	% Pred.
FVC (L)	1.88 (Gg)	1.47	8.16	3.98	211.8%
FEV1 (L)	1.75 (Gg)	1.37	7.60	3.34	190.2%
FEV1/FVC	0.92 (Gg)	0.80	-1.17	0.84	91.3%
FEV6 (L)				3.98	
FEV1/FEV6				0.84	
FEV0.5 (L)				2.49	
FEV3 (L)				3.98	
FEV3/FVC				1.00	
PEFR (L/min)				366.00	
PEFT (s)				0.08	
FEF25% (L/min)				338.64	
FEF50% (L/min)				263.82	
FEF75% (L/min)				101.88	
FEF25-75% (L/min)				212.76	
FIVC (L)				3.79	
FIV0.5 (L)				1.54	
FIV1 (L)				3.45	
FIV3 (L)				3.79	
FIV1/FIVC				0.91	
FIV3/FIVC				1.00	
PIFR (L/min)				255.60	
FIF50% (L/min)				224.64	
FIF25-75% (L/min)				235.38	
FIF2-1.2 (L/min)				224.22	
FVC/FIVC				1.05	
Ext. Vol. (L)				0.03	
FET (s)				2.99	
EOTV (L)				0.05	

15. After performing the first post-test maneuver, the user will observe that there are new measurements: % change, % BDR and a post-test session grade.

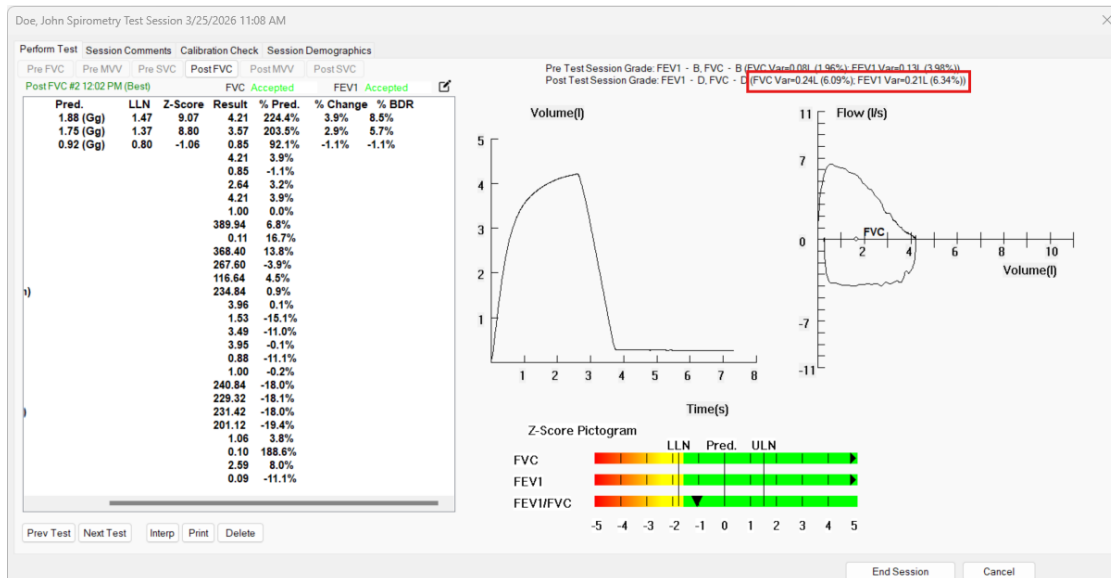


16. According to ATS 2019 Spirometry Standards, it is recommended to perform a minimum of three test maneuvers for both pre and post-test sessions. Perform additional post-test maneuvers by clicking “Post FVC.”



17. After performing additional post-test maneuvers, the user will observe that there is now a percentage variability reported.

When there are more than two post-test maneuvers performed, the variability will be calculated from two of the best post-test maneuvers.



18. Add comments as necessary. Type in freeform text or choose from a list of predetermined operator comments.

Doe, John Spirometry Test Session 3/25/2026 11:08 AM

Perform Test **Session Comments** Calibration Check Session Demographics

Session Comments Page

Maximum Character Limit of 660

Operator comments 0/660

Relating to Patient condition

- No comments
- First attempt at spirometry
- Reference values are based on ethnicity that may not be suitable for this patient
- Patient used bronchodilator(s) prior to test
- Patient smoked < 1 hr prior to test
- Patient had difficulty understanding directions
- Patient reported consumption of an intoxicant
- Observed symptoms e.g. cough, wheeze, dyspnea or cyanosis

Relating to bronchodilator responsiveness testing

- Facility bronchodilator responsiveness protocol followed for type, dose and delivery method of bronchodilator and wait time before post-BD testing
- Post-BD measurements obtained using other bronchodilator(s), dose(s), delivery method or wait time

Relating to quality of testing session

- No comments
- Acceptability and/or repeatability criteria not met despite patient's best efforts
- Spirometry induced bronchospasm

19. Click "Print" to print to a physical printer (Name: *Your Printer Here*) or to generate a PDF (Name: PDF Writer – bioPDF).

Prev Test Next Test Interp **Print** Delete

Print

Printer

Name: **HP5F9414 (HP OfficeJet Pro 9010 series)** Properties...

Status: Ready

Type: HP OfficeJet Pro 9010 series PCL-3

Where: http://[fe80:e270:eaff:fe5f9415%19]:3911/

Comment Print to file

Print range

All

Pages from: 0 to: 0

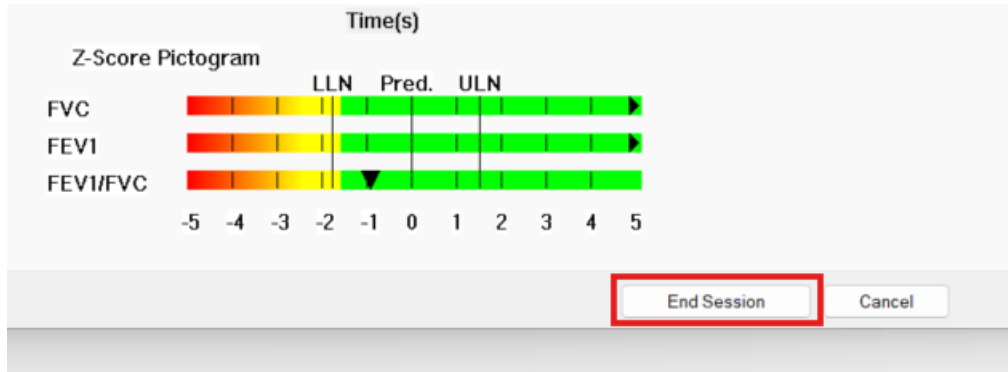
Selection

Copies

Number of copies: 1

OK Cancel

20. Click “End Session” to conclude the spirometry session and return to the main screen.



*For more information on performing a spirometry test, please visit the following website: <https://www.vectracor.com/educational-training-videos/> & consult the user manual for more detailed information.