

MESI
PARTNER CONFERENCE 2022

PRODUCT WORKSHOP

MESI mTABLET SPIRO

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MESI mTABLET SPIRO

FEV6

Quick
Spirometry

Spiro

Primary
Spirometry

Spiro+

Advanced
Spirometry



What is spirometry?

- The most used pulmonary function test (PFT)
- Spirometer is the most used tool in the diagnosis and monitoring of respiratory diseases (asthma, COPD, pulmonary fibrosis etc.)
- It measures lung function through volume and speed of air that can be inhaled and exhaled.
- A diagnostic test where **the patient needs to make all the effort**

Levels of spirometry

Quick

- Home-visiting nurses

FEV6

Quick Spirometry

Primary

- Primary healthcare (GPs)

Spiro

Primary Spirometry

Advanced

- Specialists

Spiro+

Advanced Spirometry

MESI mTABLET SPIRO

- Wireless mode of operation for practice or home-care use
- Pneumotachograph technology with **integrated self-calibration** for accurate measurements at any time
- Automatic best breath selection with a clear and intuitive measurement review
- Detailed report with the ability to switch between charts and values for a clear interpretation and full patient history
- **Part of the MESI mTABLET system, providing all system functions and integration capabilities, with the option to compare different measurements on the same screen through MESI mRECORDS**

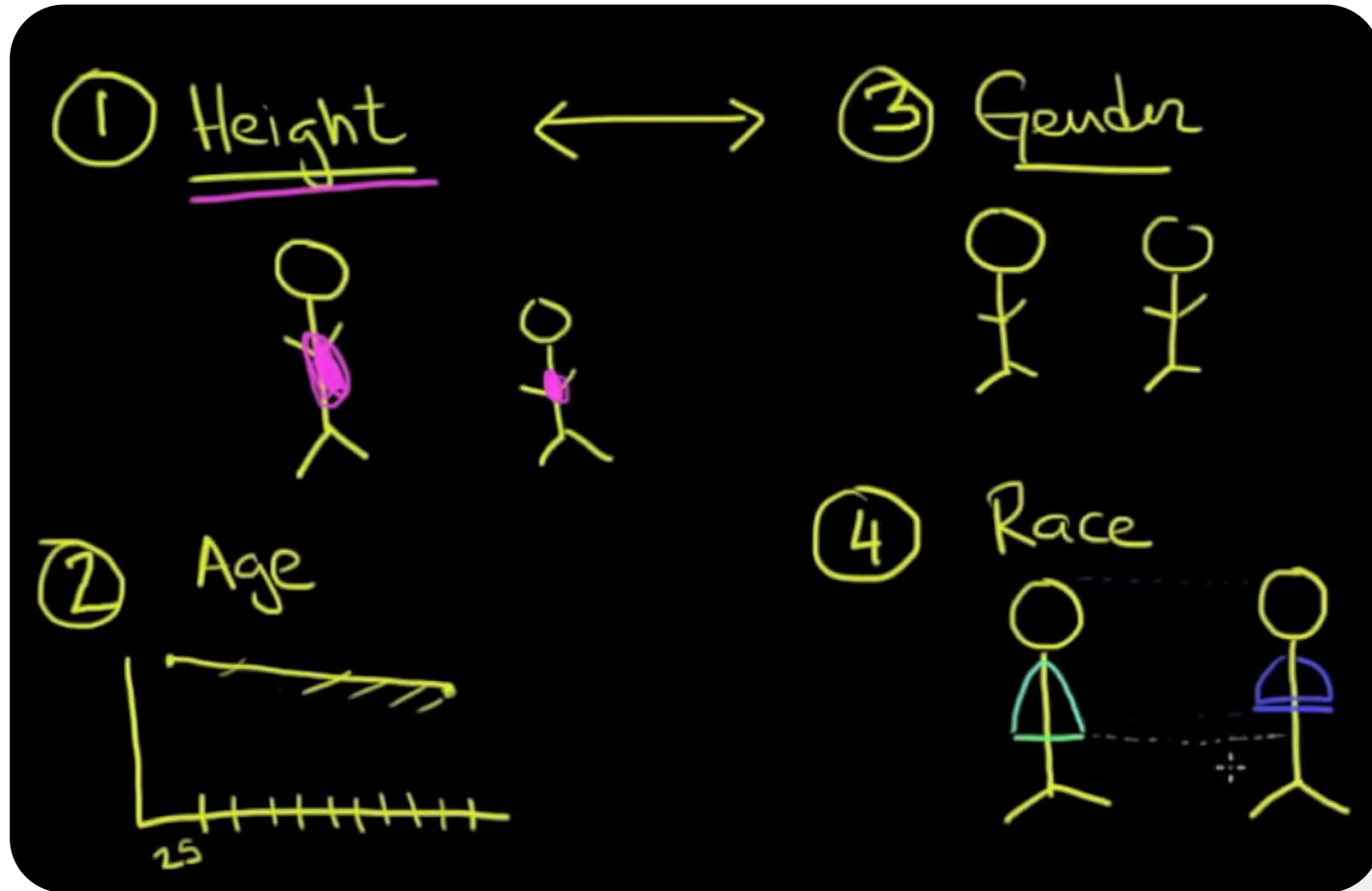


Prediction models

- Prediction models are **reference values** that represent healthy zone for each individual: according to the guidelines in a specific country
- 5 different Global Lung Initiative (GLI) prediction models are becoming standard, but several others are still used as well
- Prediction model gives the references to which the parameters are compared
- Prediction models are based on age, sex, height and ethnicity

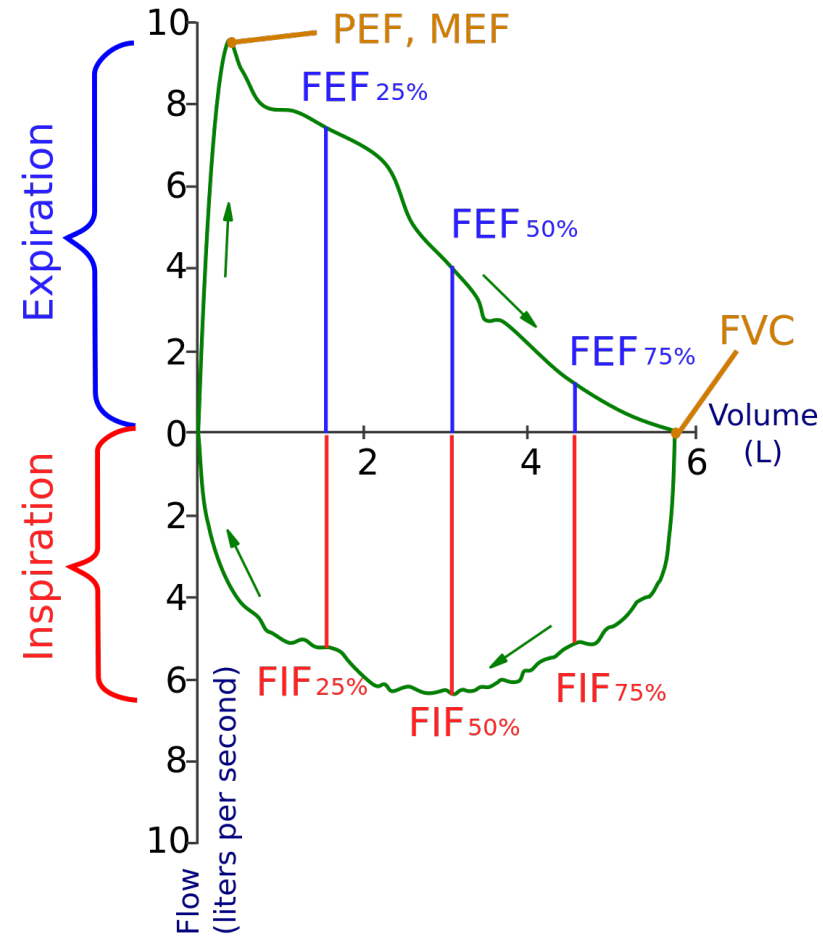
None of the prediction models offers all references!

Prediction models



Understanding the flow-volume curve

- Upper part of the curve (representing exhale) is clinically important
- Prediction model line segments displayed
- Automatic selection of the best curve (largest one)



Maneuver quality warnings*

- Hesitation → back extrapolation method (BEV needs to be <5%)
- Lazy blow → not reaching your maximal flow (PEF)
- Coughing → no explanation needed 😊
- Early termination → no explanation needed 😊

*According to the **ATS/ERS 2019 guidelines!**



Criteria indicators

- **Acceptability** criteria: at least **3 acceptable maneuvers***
- **Repeatability** criteria: at least **2 repeatable maneuvers***



Circle progress animation instead of stopwatch → Blowing for 6s and until flow drops > 25 ml/s



Green check mark = fulfilling **first** criteria!



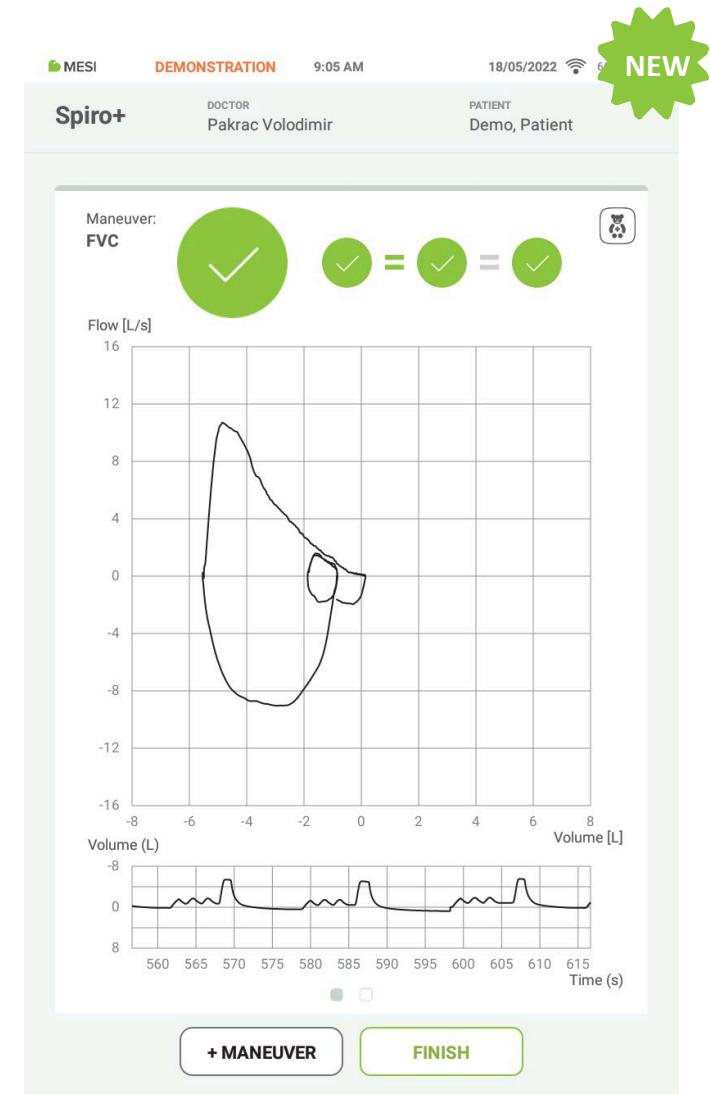
Quality indicator = maneuver error



Green equals symbol = fulfilling **second** criteria!



Quality indicator = incorrect maneuver



***According to the ATS/ERS 2019 criteria!**

Calibration

- Calibration code → with every new box of mouthpieces, a new calibration code needs to be entered
- A calibration code tells the spirometer the specifics of each batch of mouthpieces
- MESI mTABLET SPIRO is self-calibrated 1/s
- Manual accuracy check can be performed with a 3L syringe

MESI mTABLET SPIRO lineup

FEV6

Quick Spirometry

- FEV6 measurement mode (simplified FVC) – forced expiratory volume in 6 seconds
- Parameters calculated: PEF, FEV1, FEV6, FEV1/FEV6 ratio (Alternative to a Tiffneau index*)
- Basic **MESI mRECORDS** analysis

Spiro

Primary Spirometry

- FEVC and VC measurement modes
- Parameters calculated: FEV0.5, FEVC, FEV25, FEF50, FEF75, FEV25-75, FET, VEXT, VC, FEV1/FEV6, FEV1/FVC, FEV1/VC
- Pre & Post Drug phase mode (bronchodilator - asthma test)
- Enhanced history graph through **MESI mRECORDS**

Spiro+

Advanced Spirometry

- Six measurement modes (**FVC**, FEVC, VC, **FIVC**, **TV**, **SVC**)
- Parameters calculated: **PIF**, **FIVC**, **SVC**, **IVC**, **IC**, **EC**, **IRV**, **ERV**, **TV**, **FR**
- **Volume-time graph + VT6 graph**
- **Incentive (animated) mode**
- Enhanced history graph through **MESI mRECORDS: multiple-measurement history review**

Market comparison

Vitalograph Pneumotorac



MIR Spirobank II

SpiroScout PC-based



Vyaire Vintus Pneumo

Welch Allyn Spiroperfect



VectraCor Orbit spirometer

- Require a PC/tablet
- Very limited portability
- Limited expandability with other measurements
- Very limited data interoperability
- Usually very small screens
- PC software is downloaded to a particular PC
- Software updates: difficult

Market comparison

Vitalograph COMPACT™ Expert
Spirometer Diagnostic Workstation



Schiller Spirovit ST-2

MIR Spirolab



Desktop spirometers



Vitalograph Alpha touch
Spirometer with printer

- Very limited portability
- Very limited expandability with other measurements
- Very limited data interoperability
- Charge for PC software if you want to generate reports
- Software updates: complicated

MESI mTABLET SPIRO wins!

Why?

- Self-calibration + used with pre-calibrated mouthpieces for maximum accuracy
- Automatic software updates
- Not required to install a separate software, no licenses, no extra charge
- Complete data interoperability, platform for predictive medical assessment
- Intuitive interface
- Flexibility: Quick, Primary, Advanced
- Complete portability