

Supplementary Material 1: General recommendations for FFR and RFR measurements
[Modified from Achenbach et al. (28) and Svanerud et al. (8)].

Catheter selection and positioning

- Use guiding catheters (at least 5F) without side holes.
- Ascertain coaxial catheter cannulation in the coronary ostium.
- Disengage guiding catheter from ostium for pressure calibration, equalisation and recording of Pd/Pa in case of doubts about the catheter potentially obstructing the ostium.

Calibration

- Before starting RFR and FFR measurements, ensure proper zeroing of the aortic pressure (1/3 vs. 2/3 diameter of the chest)
- Flush the guidewire, lay flat when connecting/calibrating and do not move.
- Before equalisation of pressures, advance the guidewire into the coronary artery until the pressure sensor is positioned at the end of the guide catheter.
- Before equalisation of pressures, flush the guide catheter in order to remove the viscous contrast agent.
- Before equalisation of pressures, remove the introducer and close the haemostatic valve.
- Pressure curves are averaged across three-to-five heartbeats. Therefore, pressure equalisation requires some time, and no artefacts should occur during that time.

Positioning of the guidewire

- Pressure sensor should be positioned in the main vessel directly downstream the most distal lesion.
- Detecting artefacts: the sensor could interact with the vessel wall, especially in cases of a narrow vessel calibre or severe tortuosity.
- Viscous contrast agent in the coronary tree can affect the gradient Pd/Pa.

Hyperemia

- Prior to advancement of the guidewire, administer intracoronary nitroglycerine (usually 200mcg) to prevent spasms in epicardial vessels.
- In case of evaluating more than one lesion in the same patient, the operator must wait a minimum time of 5 minutes after the adenosine administration to avoid the interference of coronary vasodilatation on RFR values.

- Medications for hyperemia (exclusively for FFR; not applicable for RFR):

• Endovenous:

- Adenosine 140 µg / kg / min

- In case of borderline results, an increased dose of adenosine endovenous is possible. However, endovenous doses > 180 µg / kg / min can reduce coronary perfusion and are therefore not recommended.

• Intracoronary:

- Adenosine (up to 200 mcg of intracoronary adenosine for the right coronary artery and up to 300 mcg of adenosine for the left coronary artery).

FFR, fractional flow reserve; RFR, resting full-cycle ratio, Pd, distal pressure; Pa, aortic pressure.