

The top section of the slide features a dark teal background on the left with the 'PHYSIO DAY' logo in a light green, outlined font. Below the logo, the text 'JOURNÉES DE PHYSIOLOGIE EN CARDIOLOGIE INTERVENTIONNELLE' is written in a smaller, white, sans-serif font. The right side of the background is a light green and white graphic of a human head in profile, with a complex network of white and light green lines representing the brain's vasculature or neural pathways.

PHYSIO DAY

JOURNÉES DE PHYSIOLOGIE
EN CARDIOLOGIE INTERVENTIONNELLE

Intérêt du Pullback DFR en pré/post PCI

Clément SERVOZ

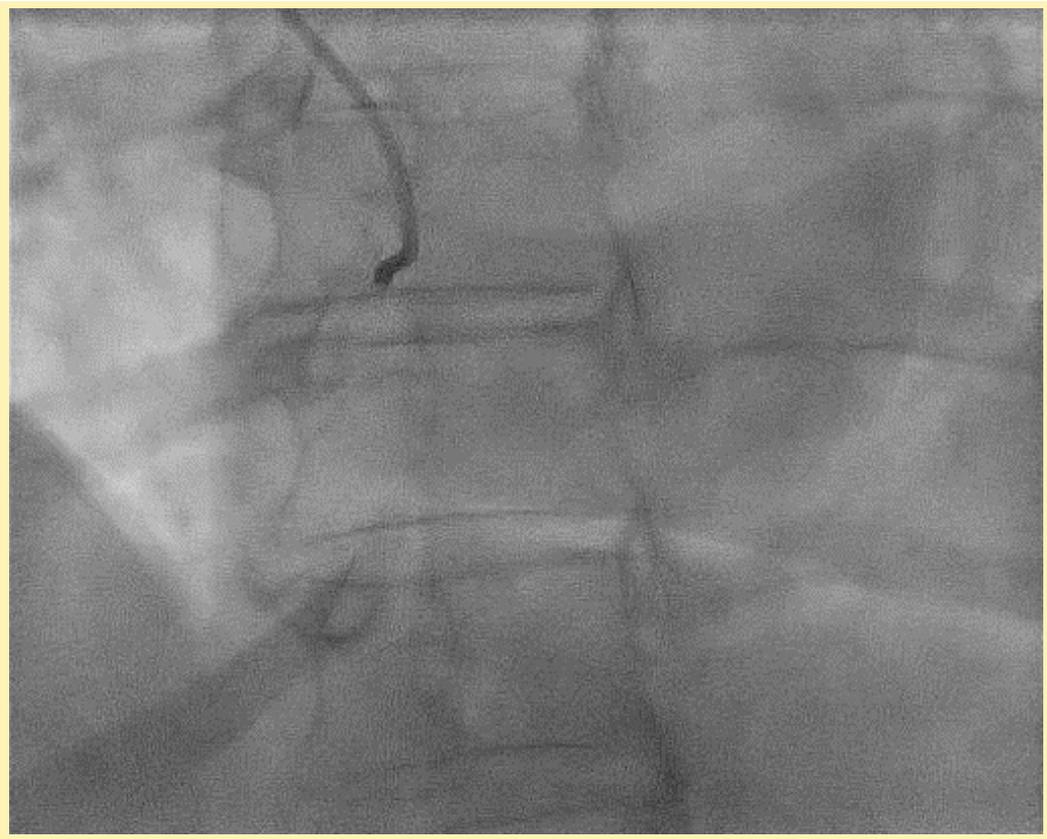
CHU Toulouse

5 & 6 AVRIL 2024

HÔTEL SHERATON · NICE



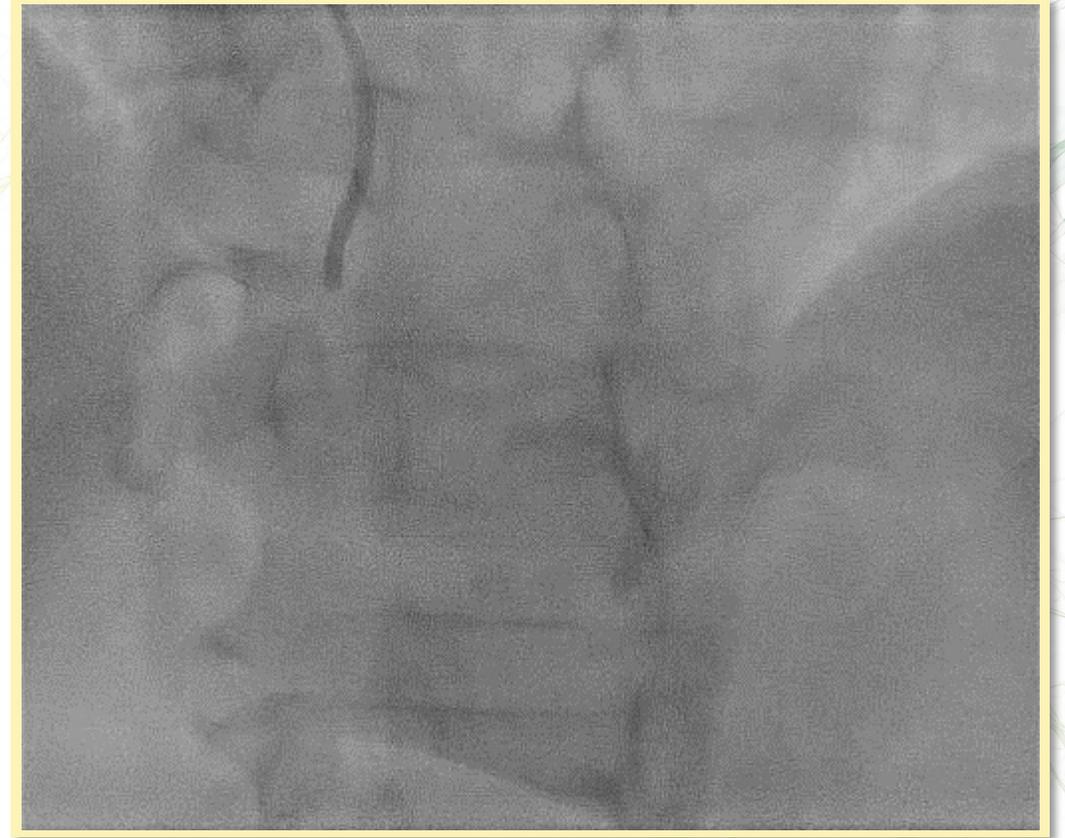
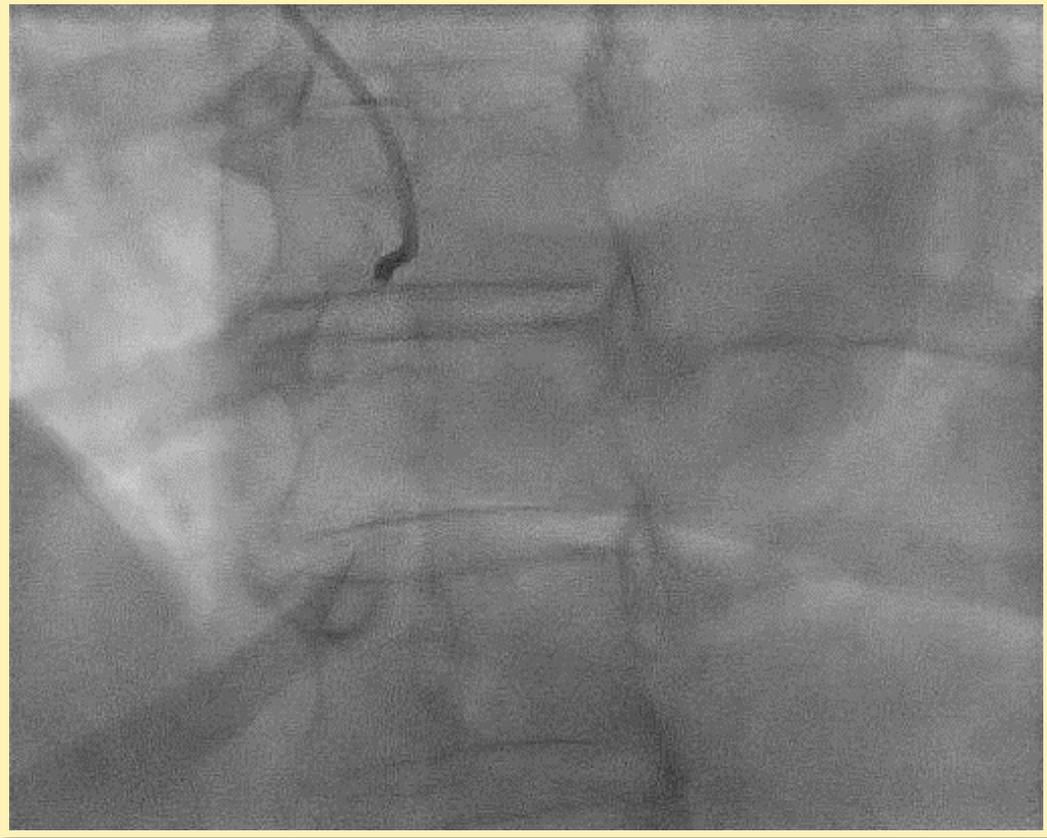
Madame M. 56 ans



- **Diabétique**
- **Score calcique positif (> 3000)**
- **Asymptomatique**
- **Absence de test d'ischémie**



Madame M. 56 ans



Quelle stratégie de revascularisation à proposer ?



DFR : Pourquoi dans notre cas ?

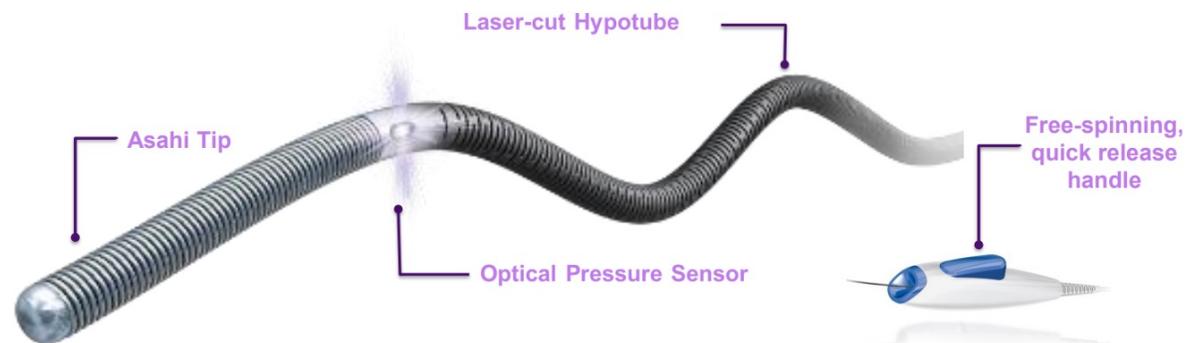
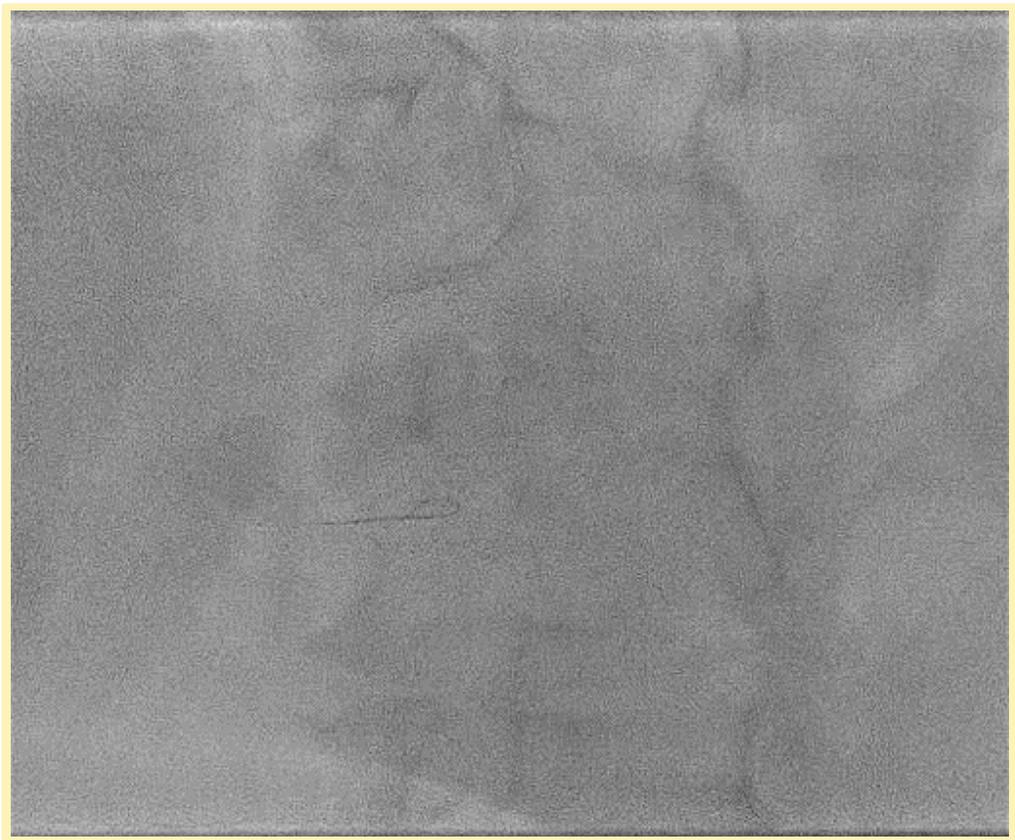


- 1.** Lésions intermédiaires étagées
- 2.** Patiente jeune diabétique
- 3.** Intérêt du pull-back
- 4.** Répétition des mesures



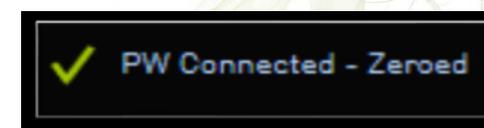
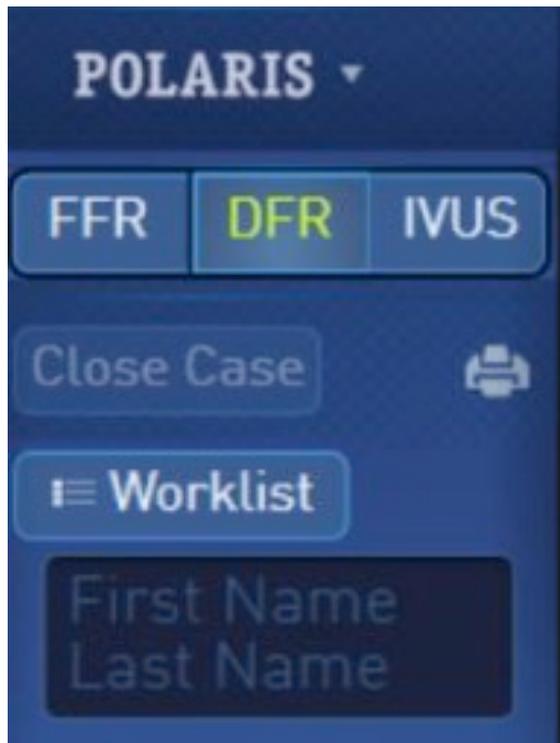
Guide FFR COMET

Boston Scientific
Advancing science for life™





Mode DFR



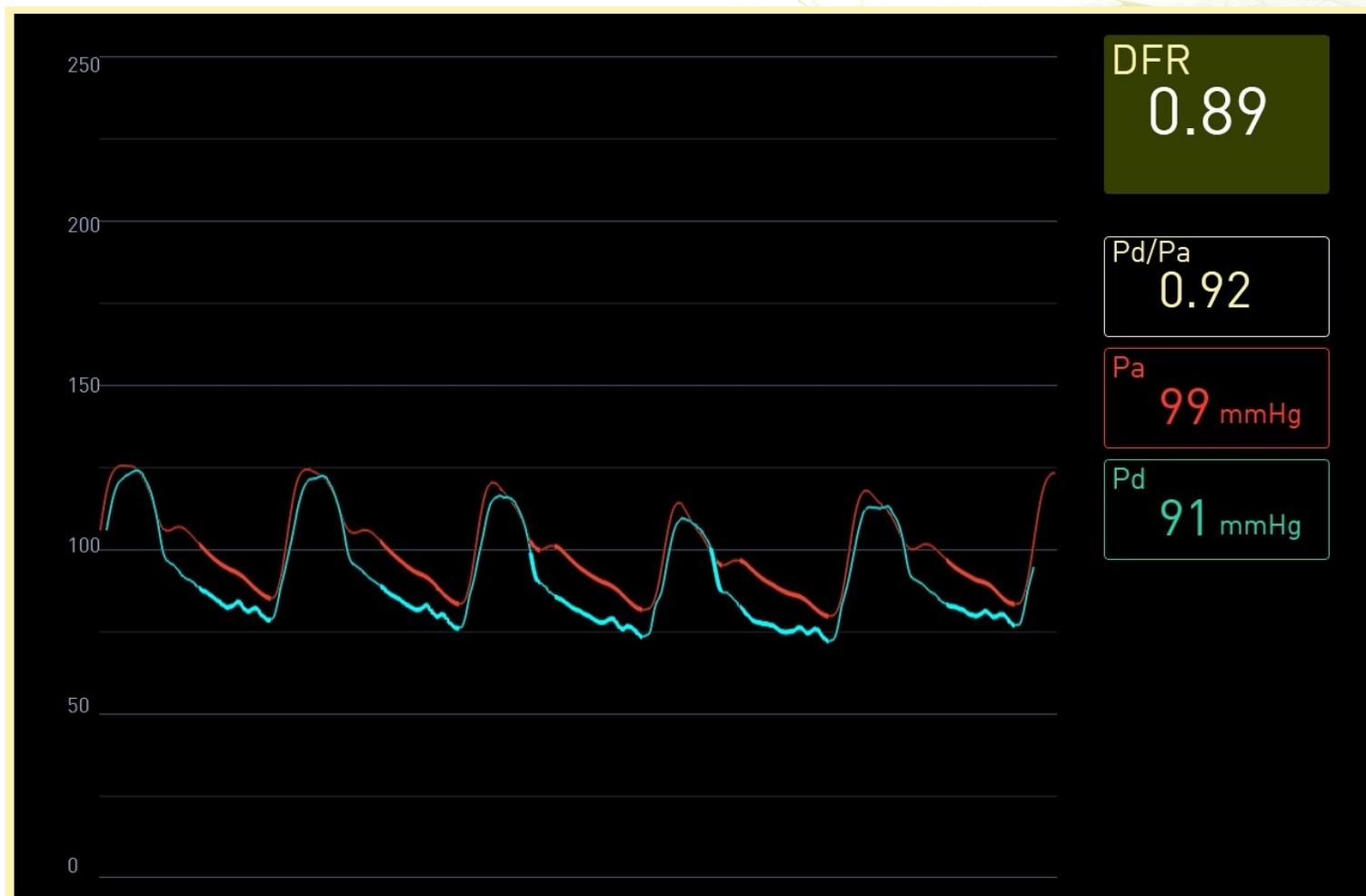


Mesure DFR

- 1. Résistances durant *wave-free period* équivalentes résistances ensemble cycle cardiaque en hyperémie**
- 2. Absence injection adénosine**
- 3. Algorithme basé sur courbe pression**
- 4. Mesure sur 5 cycles**
- 5. Significativité $\leq 0,89$**

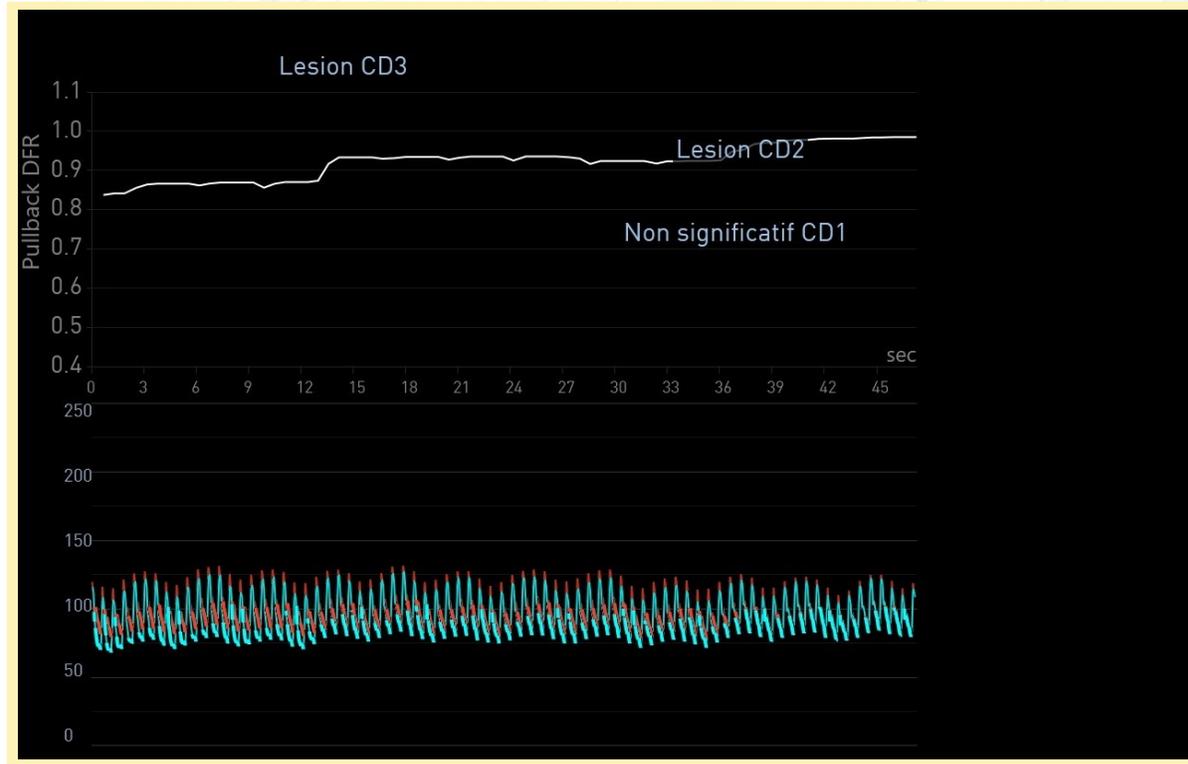


Mesure DFR en distalité



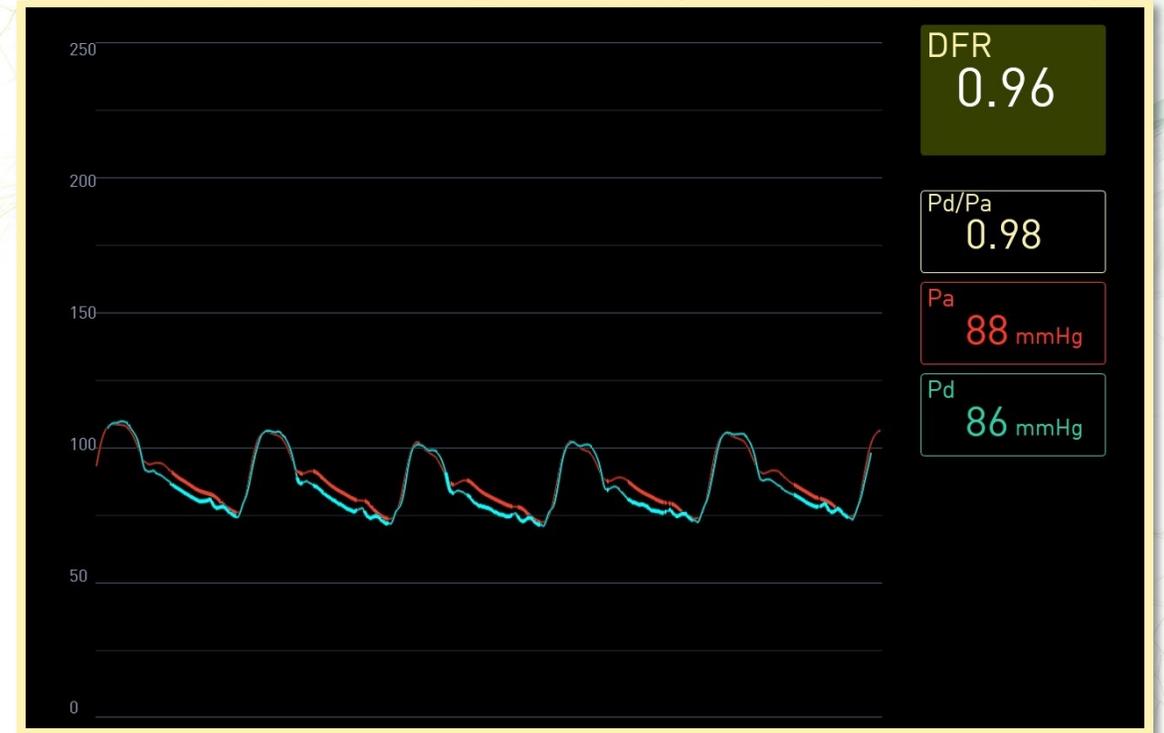
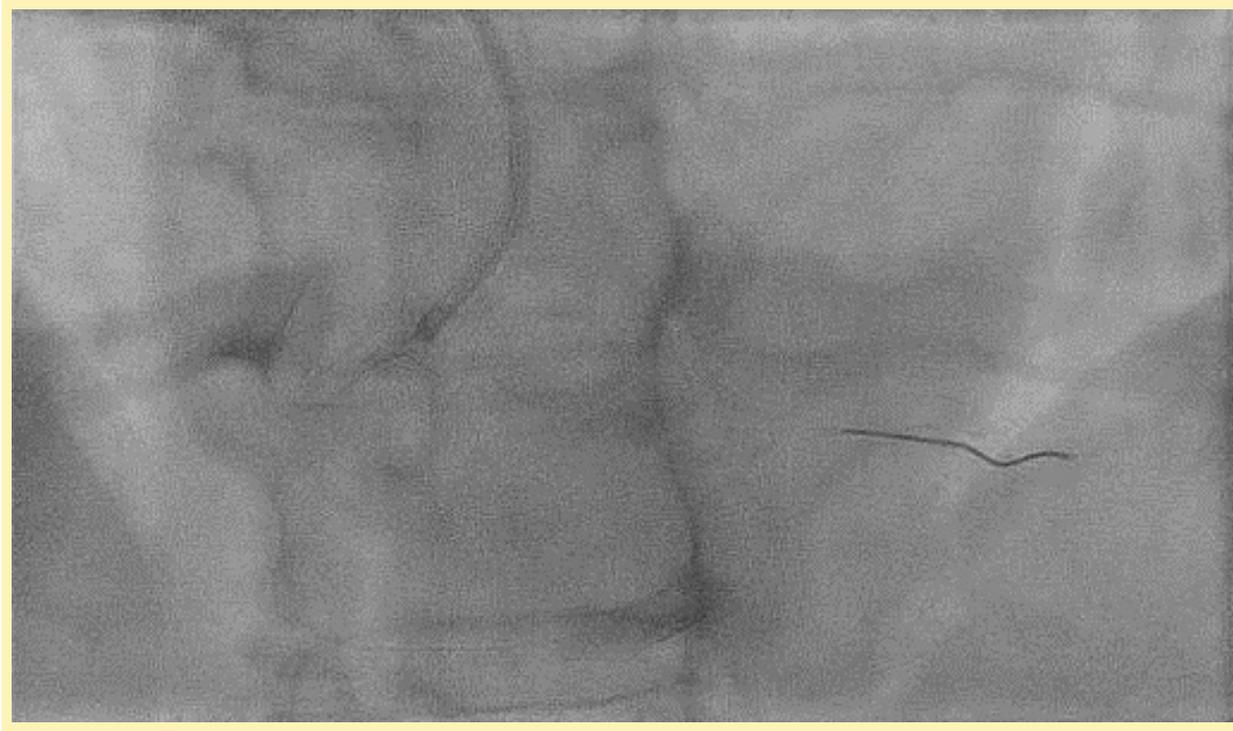


Pull-back DFR





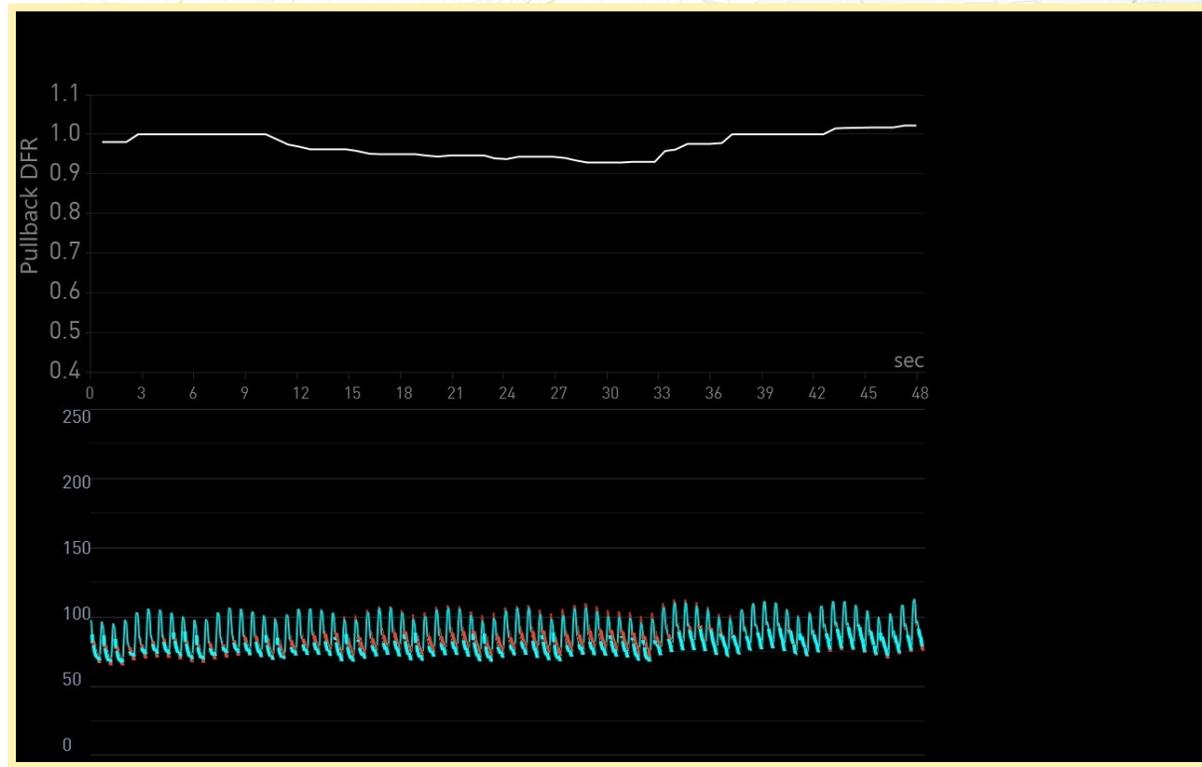
DFR post-angioplastie



Négativité DFR post-angioplastie



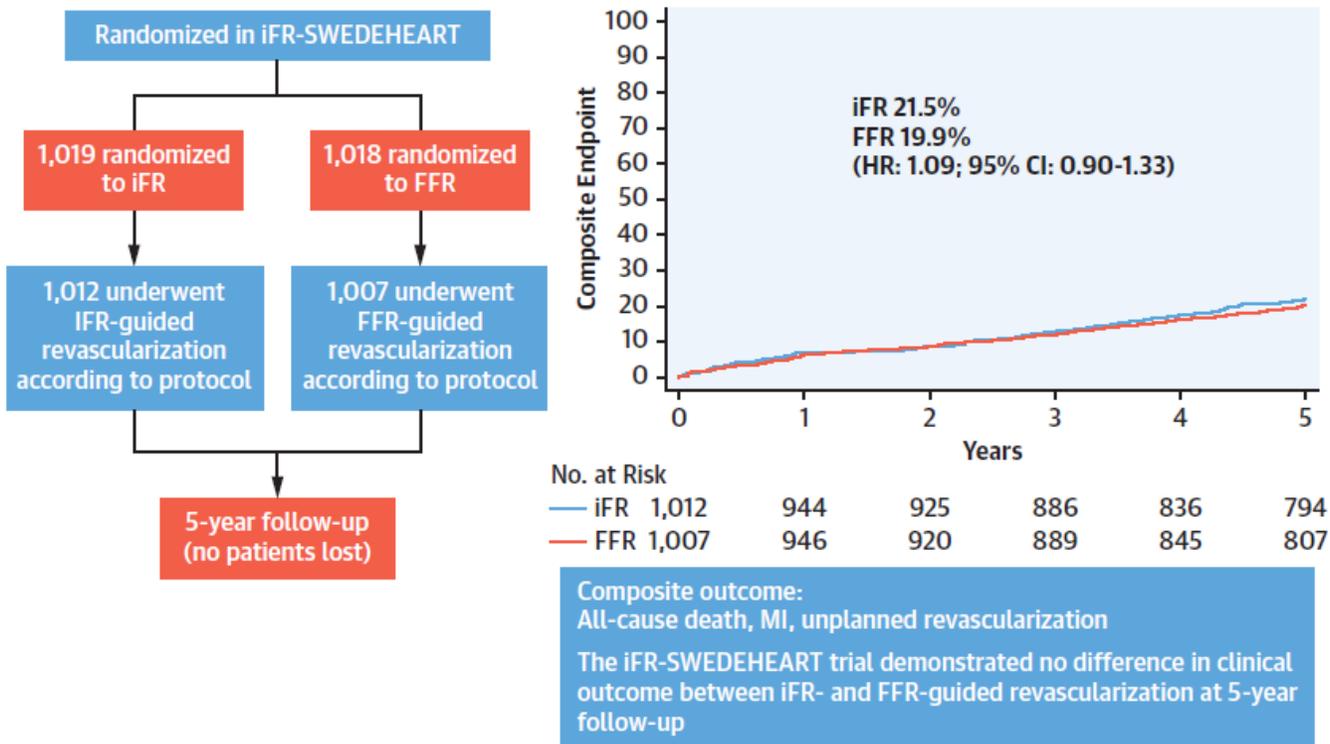
DFR post-angioplastie





SWEDE-HEART trial

CENTRAL ILLUSTRATION Instantaneous Wave-Free Ratio vs Fractional Flow Reserve in Patients With Stable Angina Pectoris or Acute Coronary Syndrome: Study Enrollment and Outcome



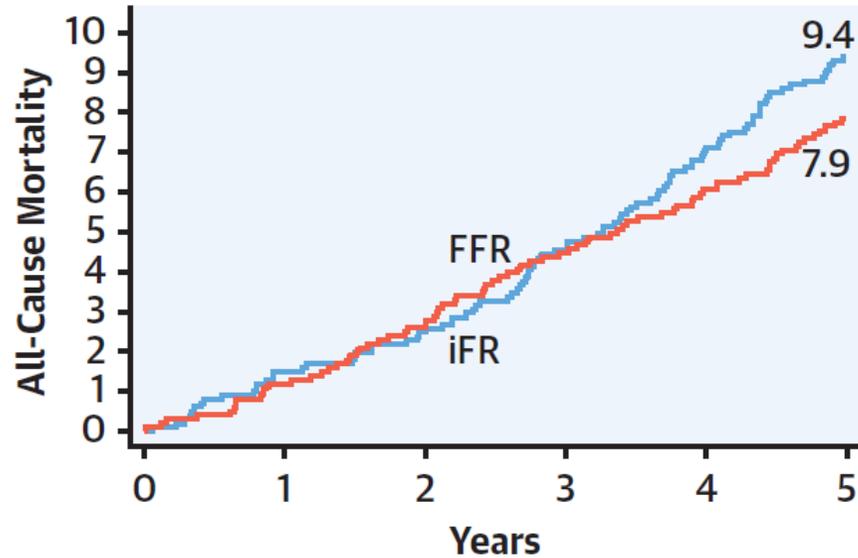
Göteborg, M. et al J Am Coll Cardiol. 2022;79(10):965-974.

(Left) Study enrollment. A total of 2,019 patients underwent physiology-guided revascularization according to protocol. No patients were lost to follow-up at 5 years. **(Right)** Kaplan-Meier curves for the cumulative risk of the composite of all-cause mortality, nonfatal myocardial infarction, or unplanned revascularization within 5 years. FFR = fractional flow reserve; iFR = instantaneous wave-free ratio; iFR-SWEDEHEART = Evaluation of iFR vs FFR in Stable Angina or Acute Coronary Syndrome; MI = myocardial infarction.

Goteberg et al., JACC, 2022



SWEDE-HEART trial



No. at Risk	0	1	2	3	4	5
iFR	1,012	997	987	966	940	917
FFR	1,007	995	980	962	946	928

TABLE 3 Endpoints at 5 Years

	iFR (n = 1,012)	FFR (n = 1,007)	HR	95% CI
Composite endpoint	218 (21.5)	200 (19.9)	1.09	0.90-1.33
All-cause mortality	95 (9.4)	79 (7.9)	1.20	0.89-1.62
Nonfatal myocardial infarction	58 (5.7)	58 (5.8)	1.00	0.70-1.44
Unplanned revascularization	117 (11.6)	114 (11.3)	1.02	0.79-1.32
Cardiovascular death	28 (2.8)	33 (3.3)	0.85	0.51-1.40
Noncardiovascular death	67 (6.6)	46 (4.6)	1.46	1.00-2.12

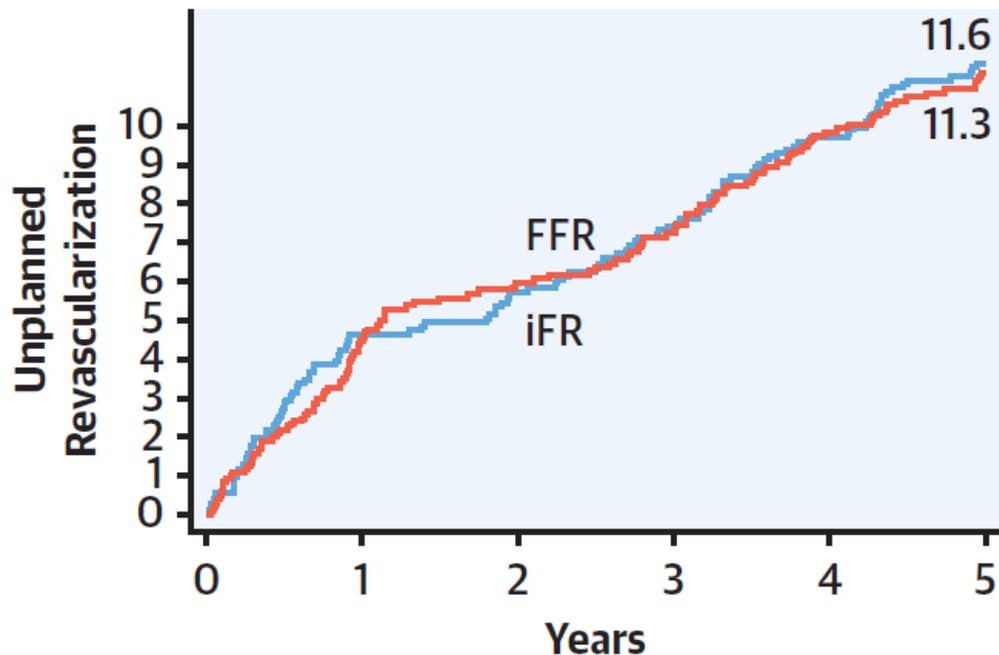
Values are n (%) unless otherwise indicated.

Abbreviations as in [Table 1](#).

Goteberg et al., JACC, 2022

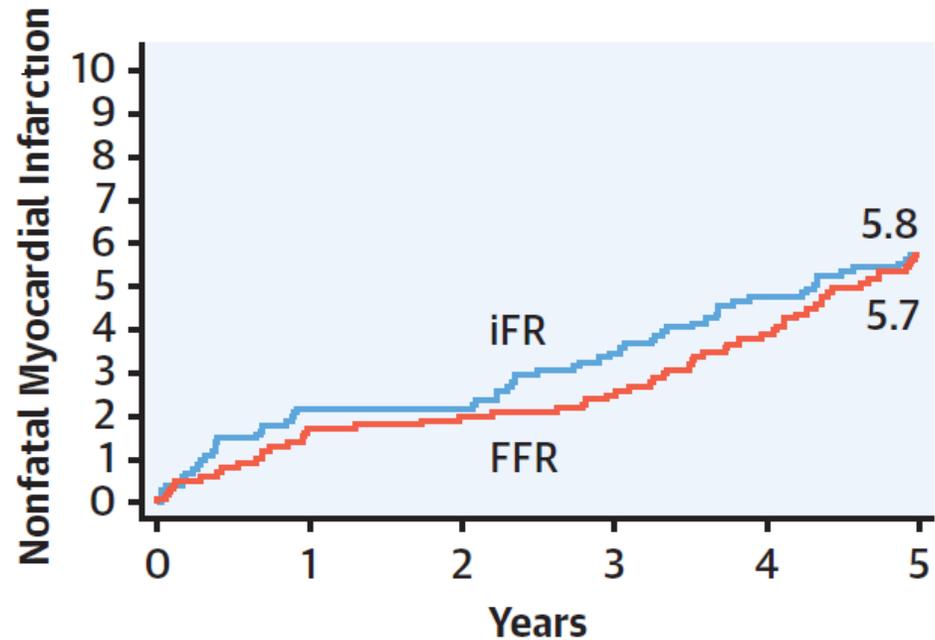


SWEDE-HEART trial



No. at Risk

iFR	1,012	965	954	937	914	895
FFR	1,007	962	947	934	908	893



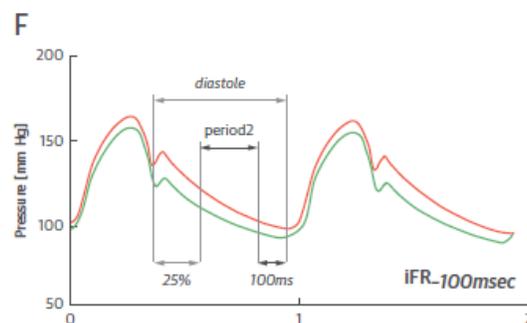
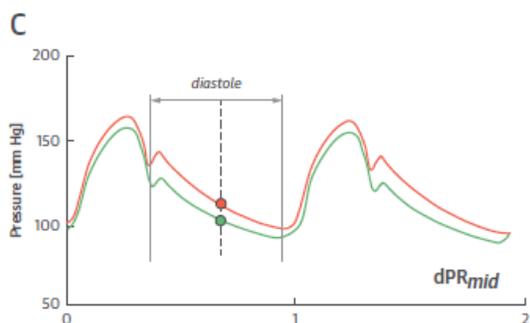
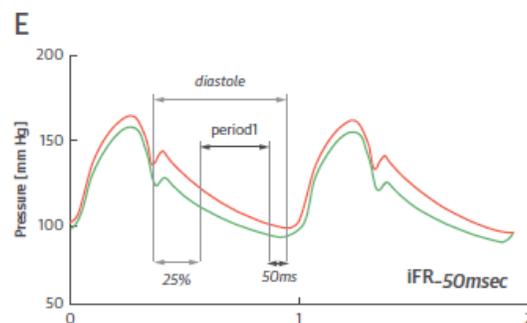
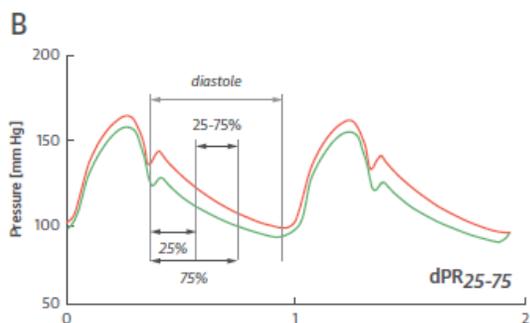
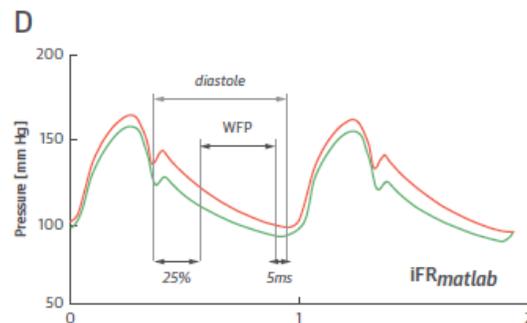
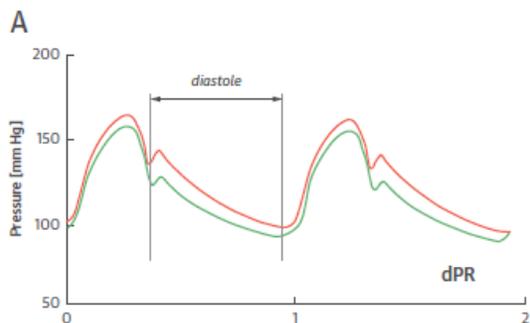
No. at Risk

iFR	1,012	990	990	977	964	954
FFR	1,007	990	987	982	968	949

Goteberg et al., JACC, 2022



Non-Hyperemic Pressure Ratios (NHPR)



— Pa — Pd

Tous numériquement identiques :

1. Corrélation $>0,99$ versus iFR
2. Cutoff identique pour tous les indices

Veer et al., JACC intervention, 2017



Intérêt du Pullback DFR en pré/post PCI

- **Combiner l'image angiographique et la physiologie**
- **Multi-tronculaire**
- **Coût/temps/effets indésirables**
- **iFR depuis 2011 (DEFINE FLAIR – iFR SWEDE HEART)**
- **Comparabilité des différents index (effet-classe)**
- **DFR *versus* FFR ?**