

# XIV

**HTAi 2017**  
Rome, Italy

**JUNE 17-21, 2017**  
#HTAiRome2017

## Optical Coherence Tomography To Guide PCI: A Rapid Assessment

Antonella Negro, Fabio Trimaglio, Maria Domenica  
Camerlingo, Giulia Falasca, Susanna Maltoni

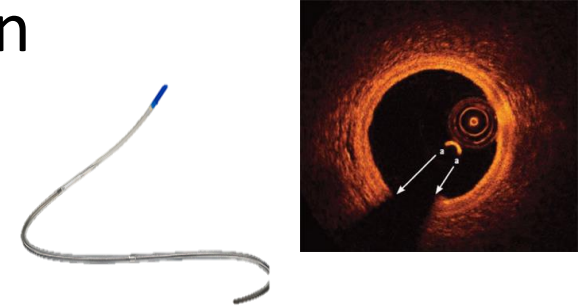
**Regional Agency for Health and Social Care  
Emilia Romagna Region**



# Technology and Rationale

## Technology

Optical coherence tomography (OCT) is an invasive intravascular imaging modality, based on near-infrared light emission (approximately 1,300 nm wavelength)



## Rationale

**FD-OCT through a better visualization of coronary artery walls and atherosclerotic lesions** is expected to guide PCI in patients with complex or unclear lesions, by providing additional information useful for the choice of stent's type.

<b>Population</b>	Patients eligible for invasive coronary imaging to guide PCI, with unclear or complex coronary lesions		
<b>Intervention</b>	FD-OCT in addition to coronary angiography		
<b>Comparator</b>	Coronary angiography alone or coronary angiography plus IVUS		
<b>Outcome</b>	<b>Efficacy</b>	<b>Clinical</b> Incidence of MACE Incidence of stent restenosis Incidence of stent thrombosis	<b>Surrogate</b> Post-PCI FFR Stent's uncovered struts
	<b>Change in management</b>	Pre-PCI OCT: treatment planning modification Post-PCI OCT: stent deployment optimization	
	<b>Safety</b>	Procedure-related complications Adverse events	
	<b>Technical performance</b>	Procedural success In vivo intra- and inter-observer reproducibility of measurements Procedural and fluoroscopy time Diagnostic accuracy in measuring coronary arteries' parameters	

Full text available at: .....

[http://assr.regione.emilia-romagna.it/it/servizi/pubblicazioni/short-report/SR9\\_intra-coronary](http://assr.regione.emilia-romagna.it/it/servizi/pubblicazioni/short-report/SR9_intra-coronary)

# Included study

Secondary literature (4 HTA reports , 1 systematic review)  
Primary studies (34)  
Ongoing studies (15)



## Primary studies

Efficacy	2 RCT	⊕ Only surrogate outcome
Safety	23 studies	Comparable with angio-guided
Change in management	1 RCT	No effect
Technical performance	22 studies	⊕ On procedural success, procedural and fluoroscopy time

## Estimate of target population in Emilia-Romagna Region

- Emilia-Romagna's Hospital Discharge Records Database (SDO)
- Emilia-Romagna's Medical Device Records Database (DIME)

**from 380 patients to 424 patients**

Full text available at:

[http://assr.regione.emilia-romagna.it/it/servizi/pubblicazioni/short-report/SR9\\_intra-coronary](http://assr.regione.emilia-romagna.it/it/servizi/pubblicazioni/short-report/SR9_intra-coronary)

