

The role of advanced imaging in CLTI

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Disclosure

Speaker name:

K Stavroulakis

I have the following potential conflicts of interest to report:

Consulting

Employment in industry

Stockholder of a healthcare company

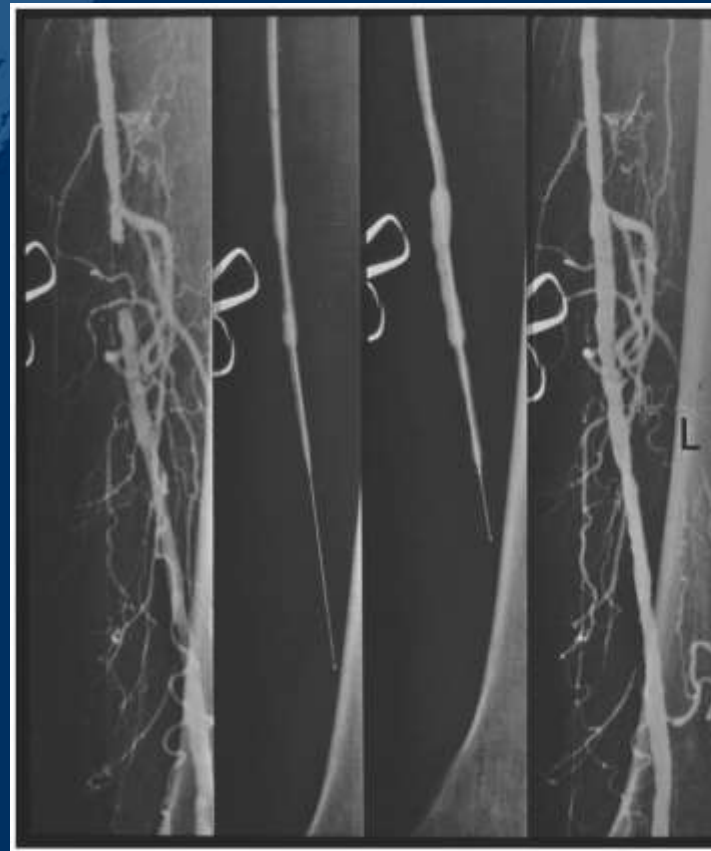
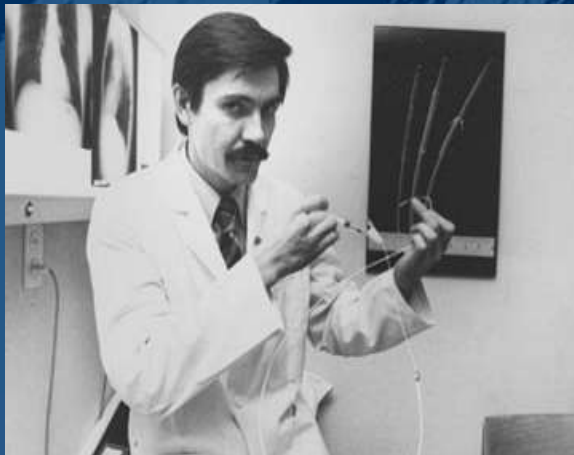
Owner of a healthcare company

Other(s)

I do not have any potential conflict of interest

When it all started..

A. Grüntzig



Study 2
Arm = 145/90
A. 145/90
A. 106
Grüntzig 155/77

Med. Pol. Dr. Strudi

9 1912 27.10.75 043 900

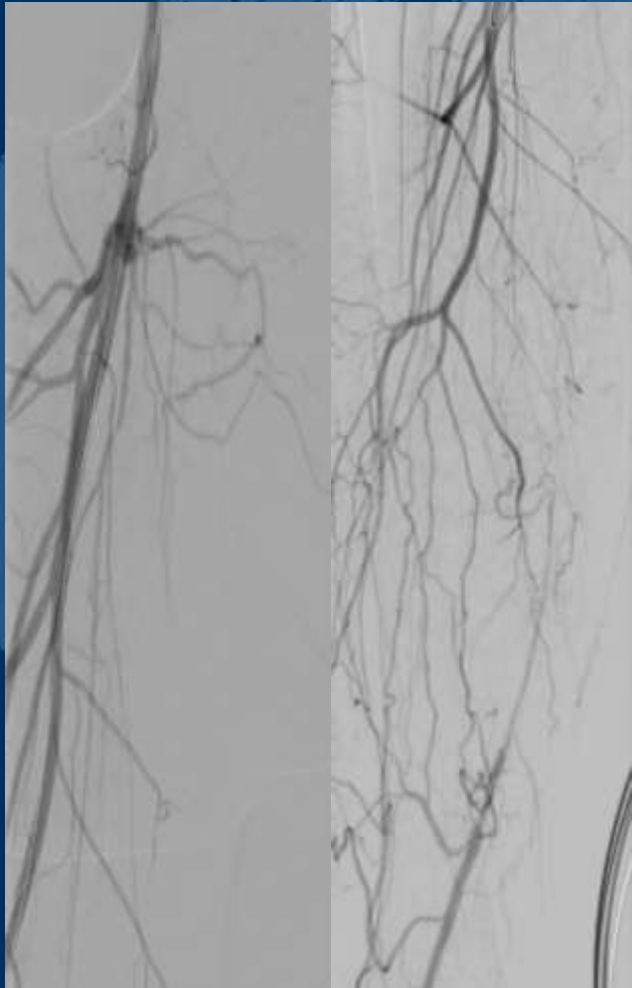
Dilatation lt. A. femoralis superficialis

Statische Funktion gelber Cook-Catheter. Angiographie.
Es stellt sich ein 18 mm langer Segmentverschluss
im mittleren Drittel der A. fem. sup. dar. Der Fluss
ist langsam und geht über multiple Kollateralen.
Stenosen sind im Triangulum tibiale subtotale nach Ab-
gang der A. tibialis anterior, die von ihrem mittl.
Drittel an total verocclusen ist. Der Fuß wird
versorgt über die Tibialis posterior und Kollaterale-
ren aus der Fibularia. Druckmessung. Die Passage
durch den Verschluss ist schwierig, da er sehr dicht
ist, ohne dass Kalk absehbar wäre (Filterstanz!).
Nachher auf grauen Dichtung, mit Verstärkungskath.
gelingt die Passage. Nachher auf Dilatationskath.
3 malige Dilatation. Rückzug. Angios Der Verschluss
ist jetzt nahezu vollständig auf 8 mm aufgedehnt.
Der Tibialis posterior-Winkel taucher. Narbenlos.

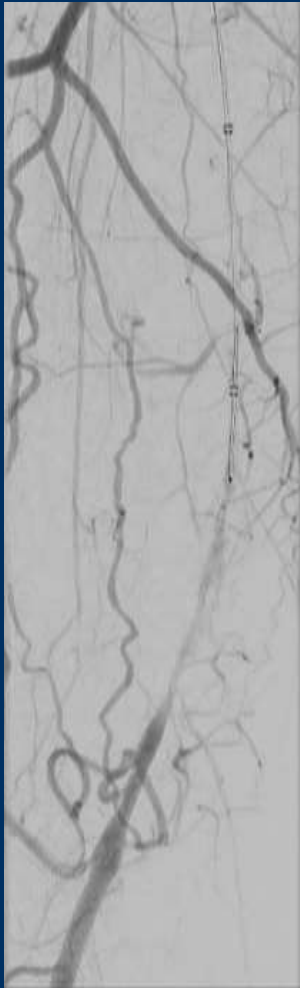
Dr. Grüntzig GA / Dr. Nahler GA / 10

But.. we pretty much do the
same..

Angiogram



Recanalization



Treatment



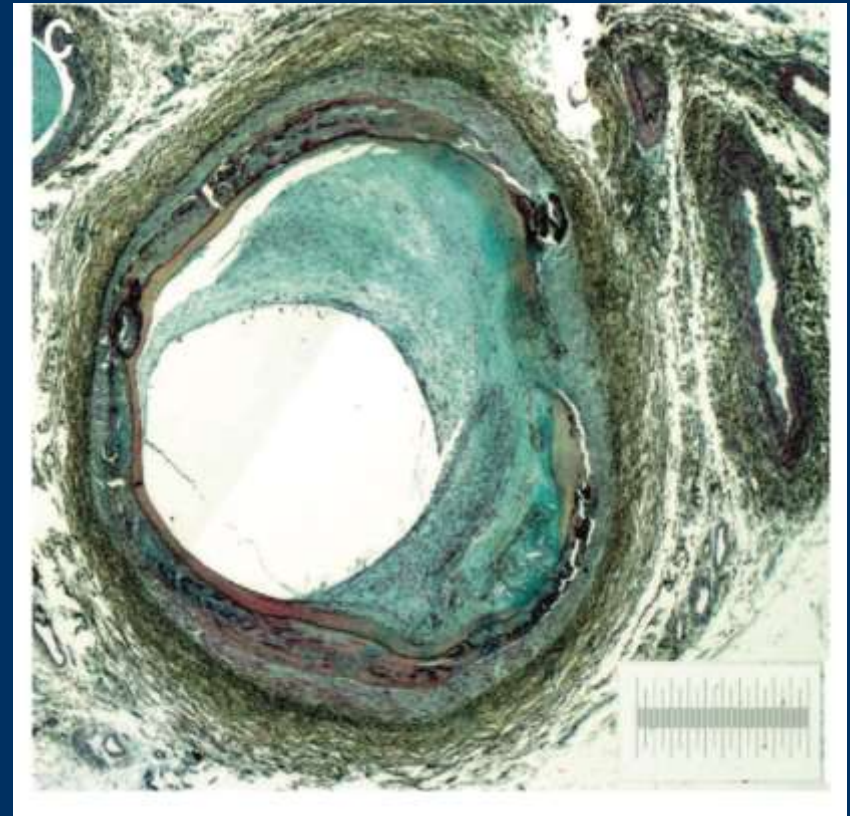
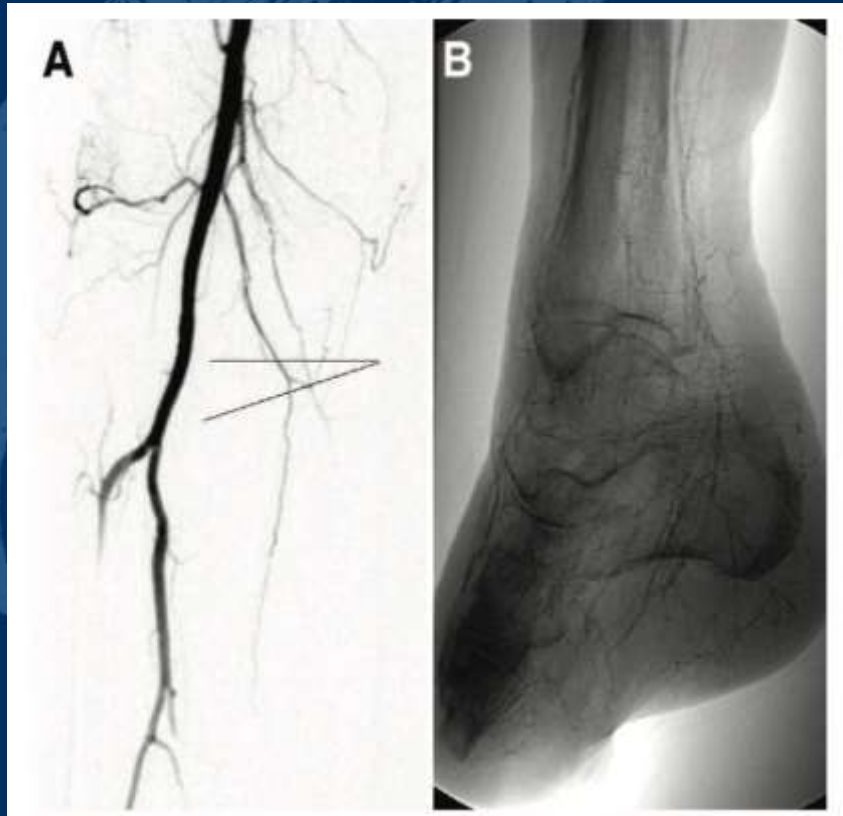
Angiogram



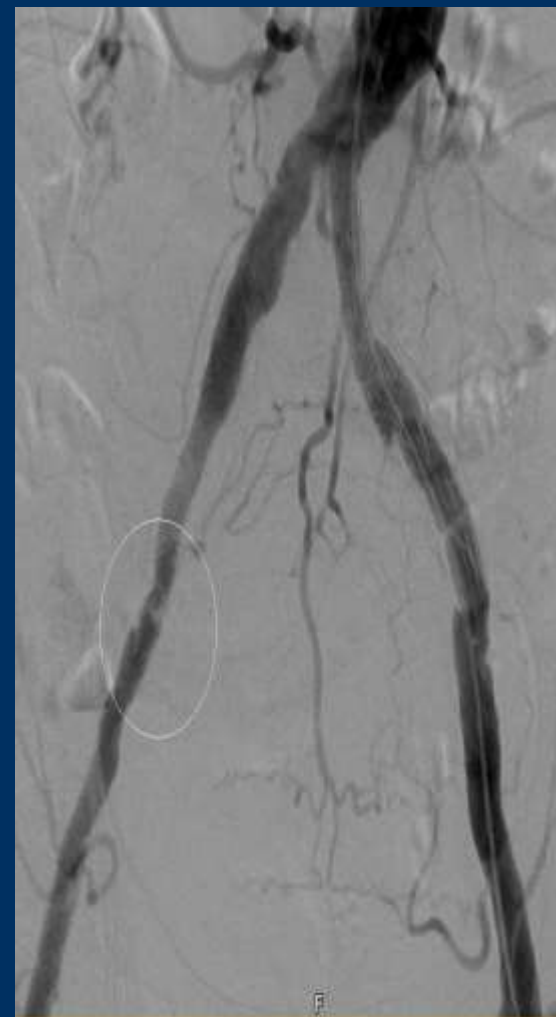
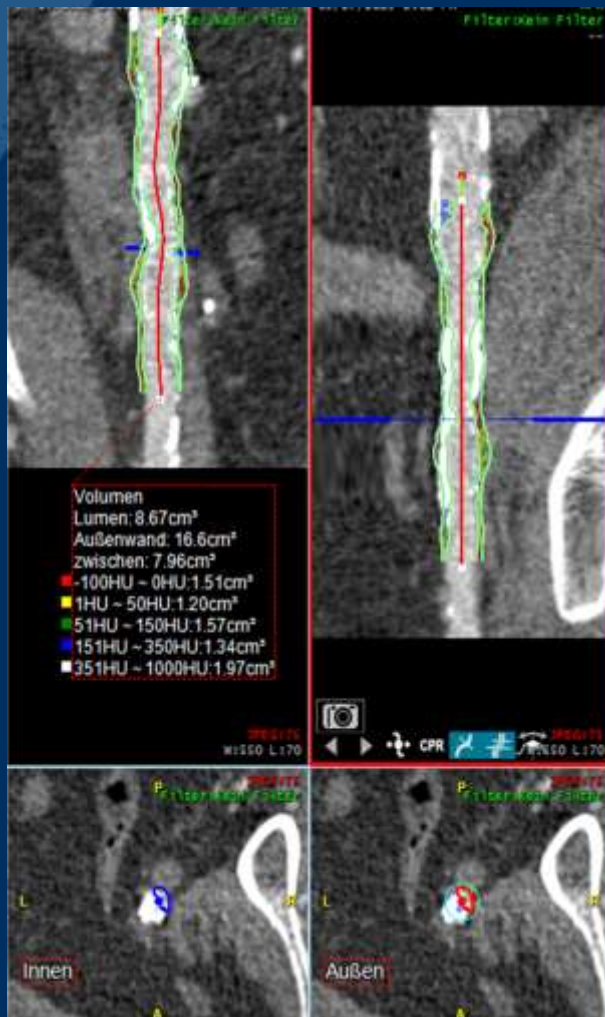
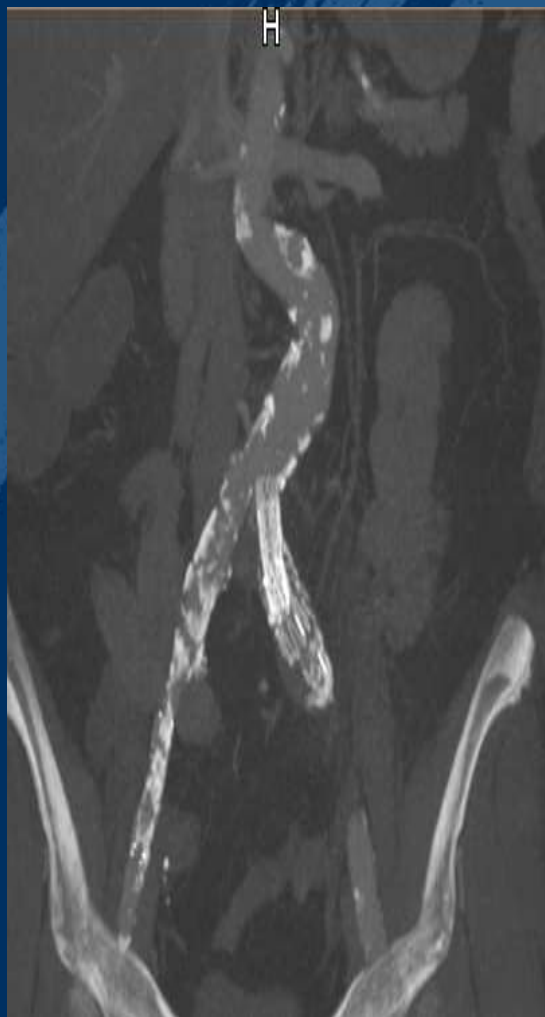
But how reliable is an angiogram?

Angio: Patent vessel

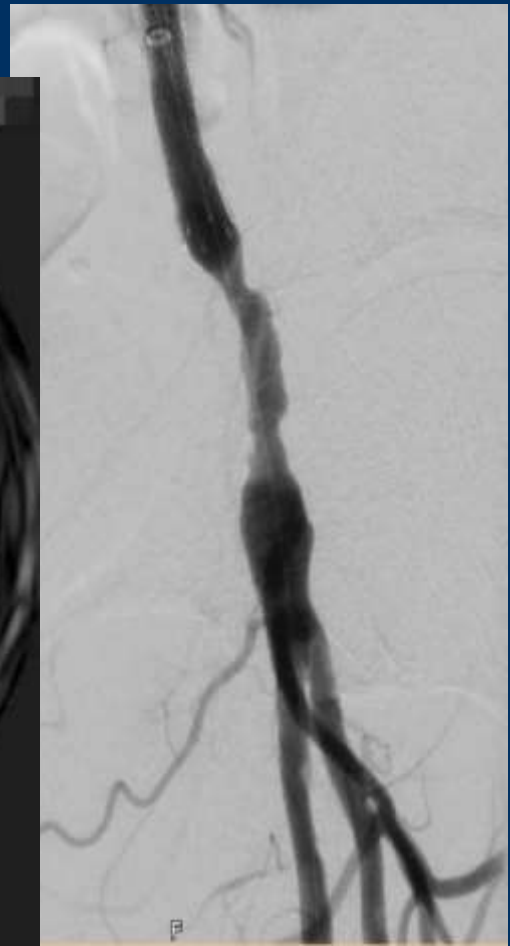
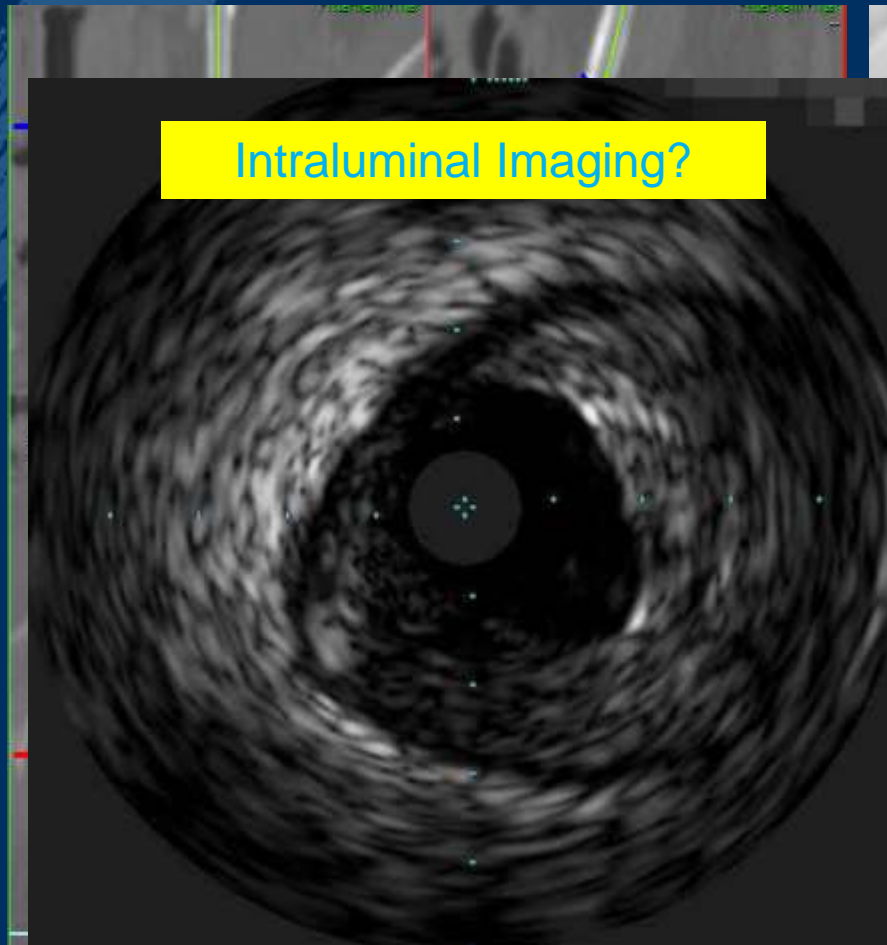
Pathology: 40% Stenosis



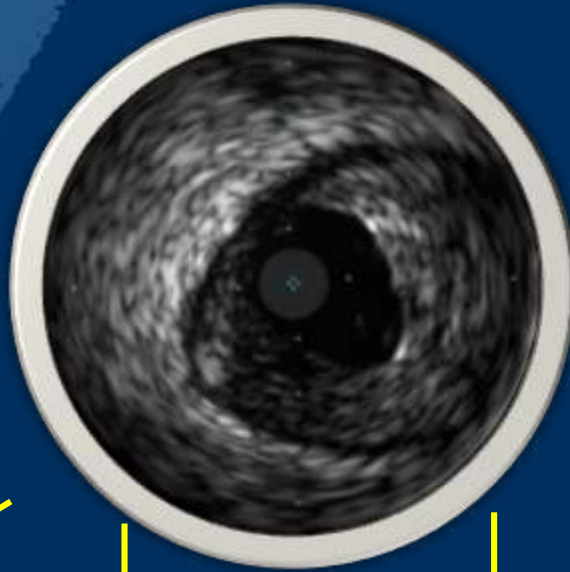
When angio fails



When angio fails



IVUS for CLTI treatment



Crossing

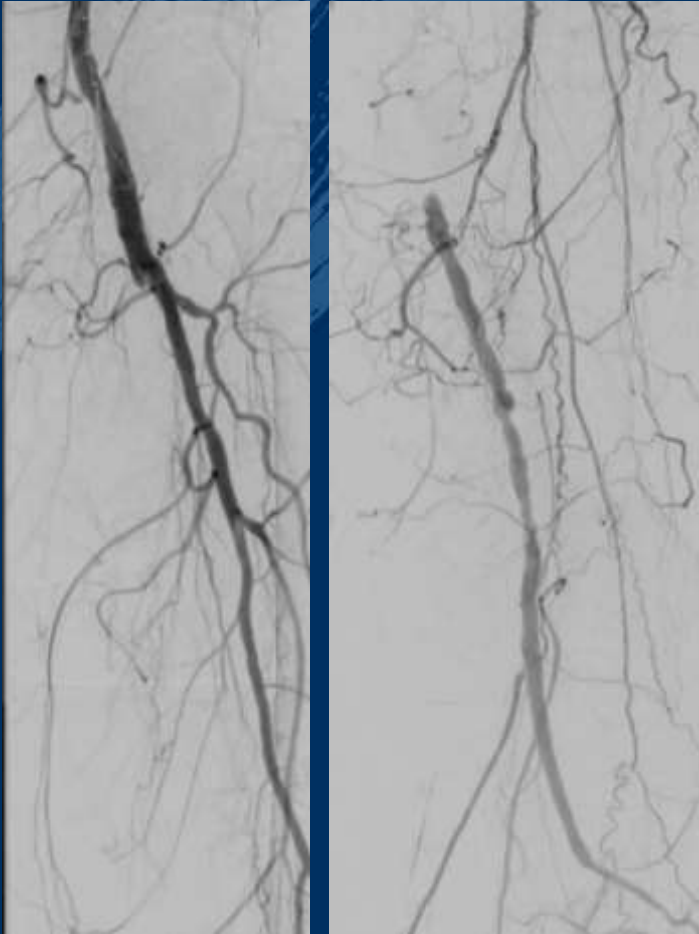
Plaque Morphology

Sizing

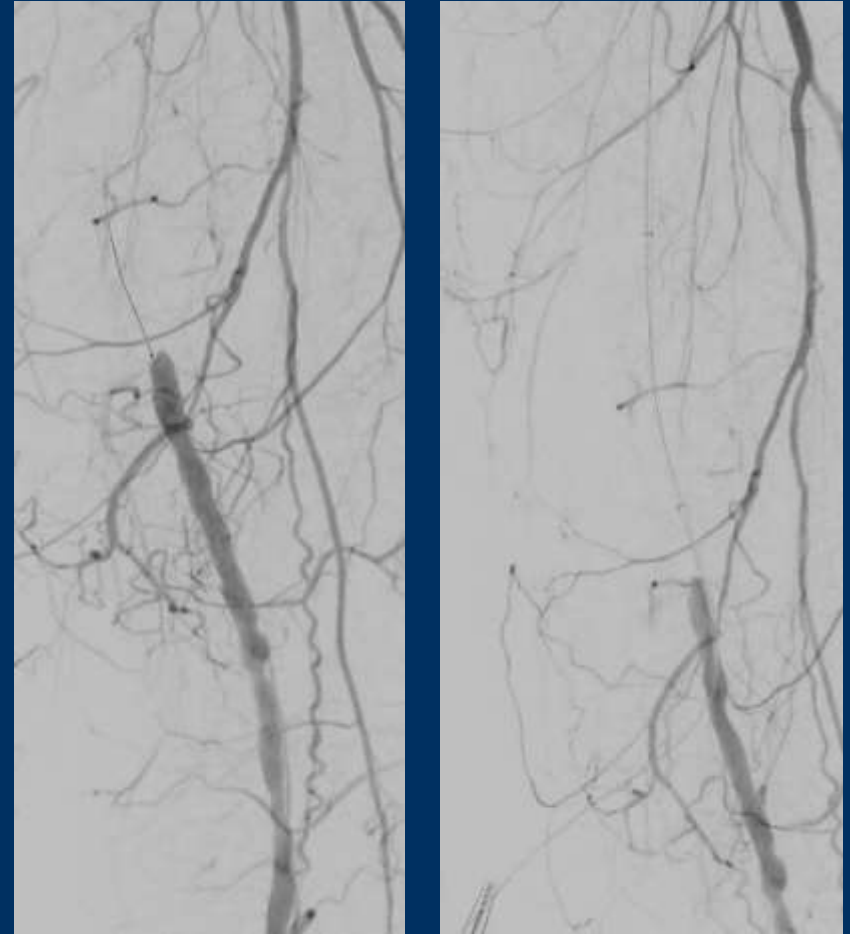
Guide treatment

CTO Crossing

Diagnostic Angiogram

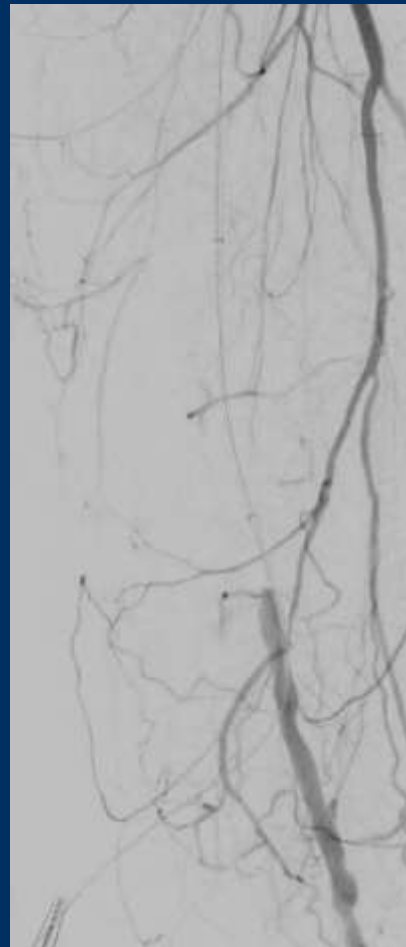
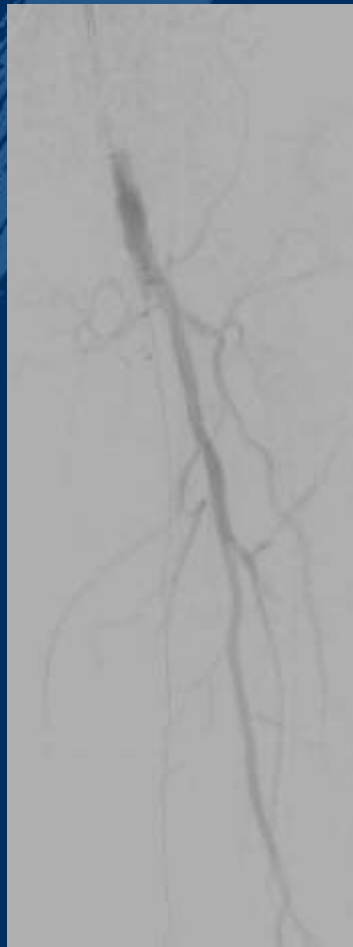
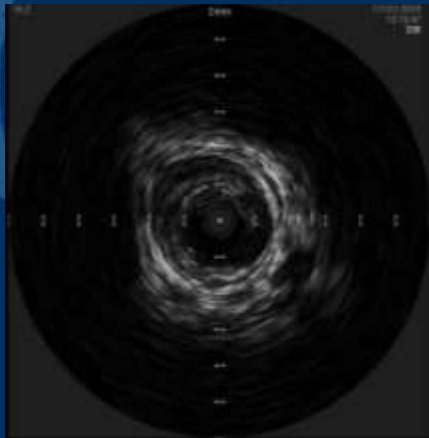
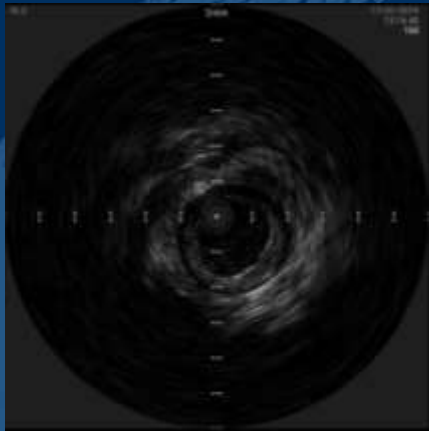


Antegrade/Retrograde Crossing

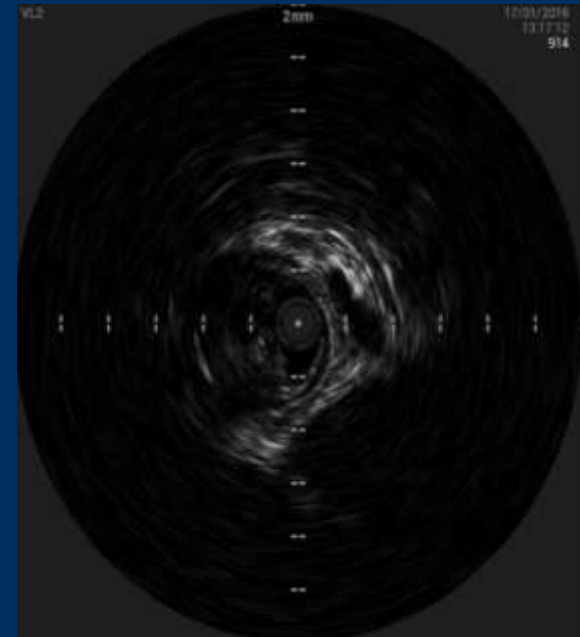


CTO Crossing: Subintimal?

Intimal Crossing



Subintimal Crossing



Plaque evaluation

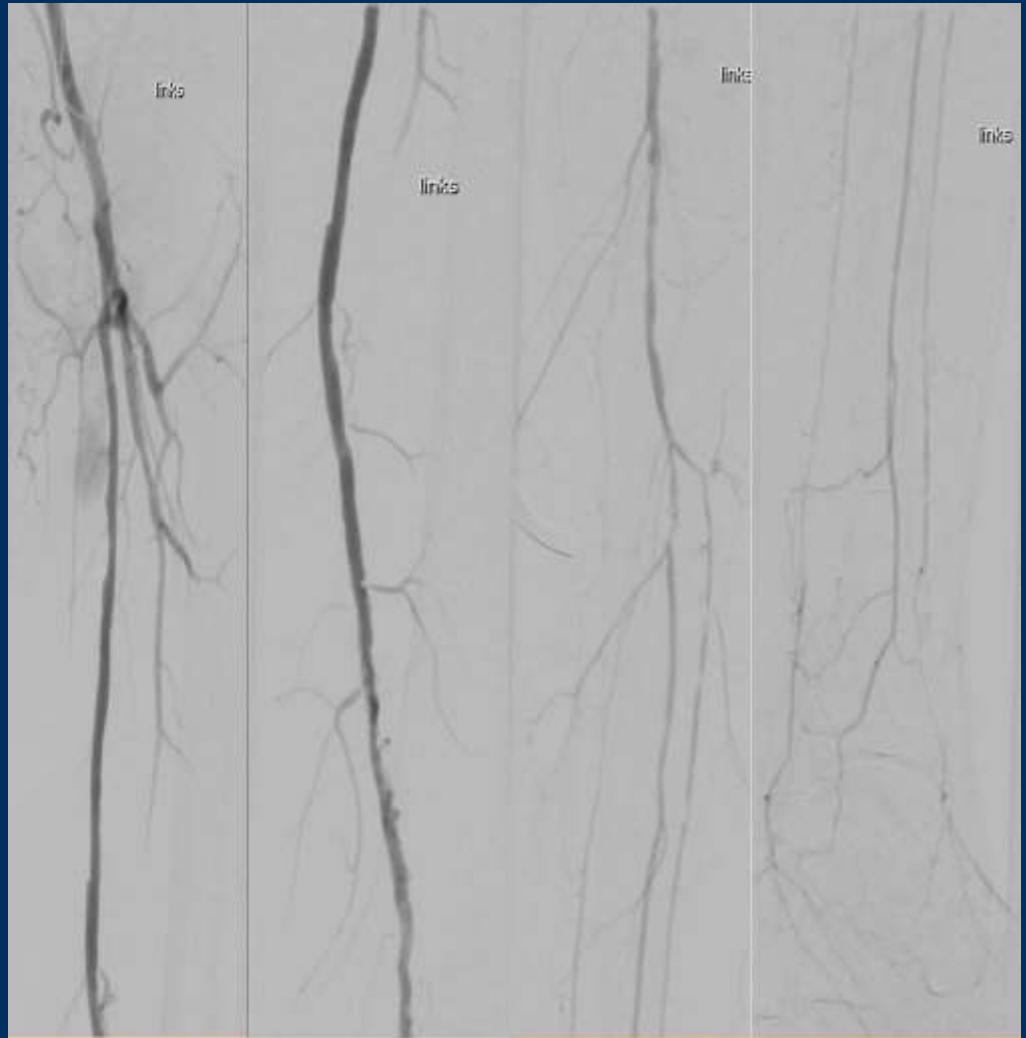


The IVUS VS visual estimation project

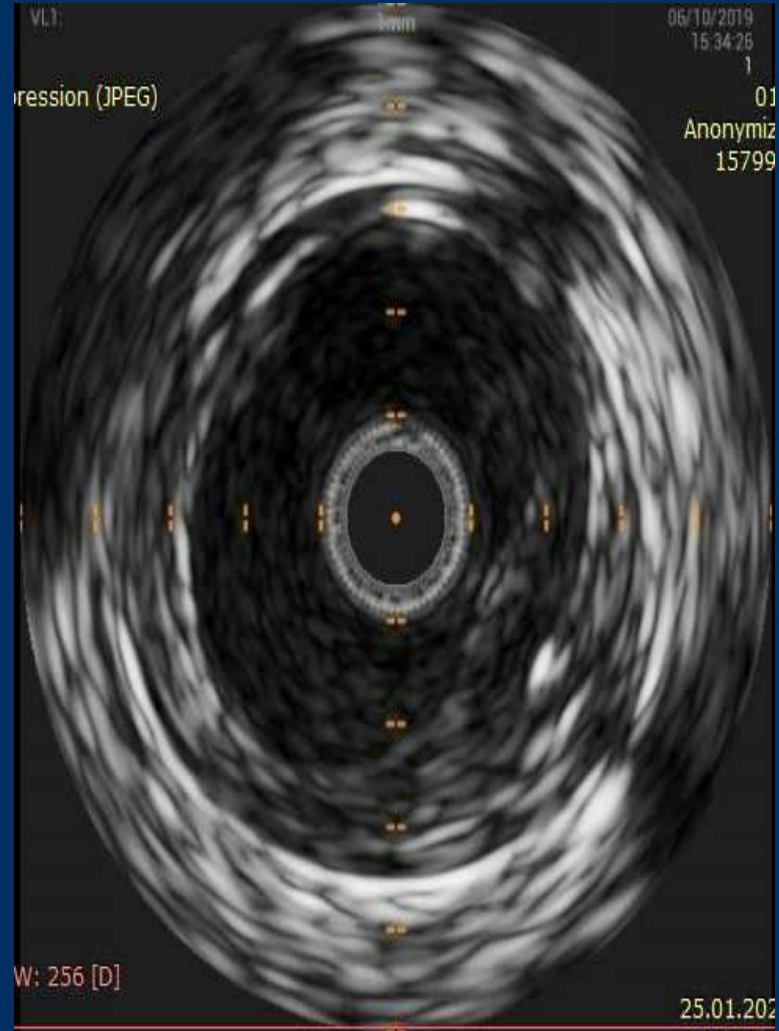
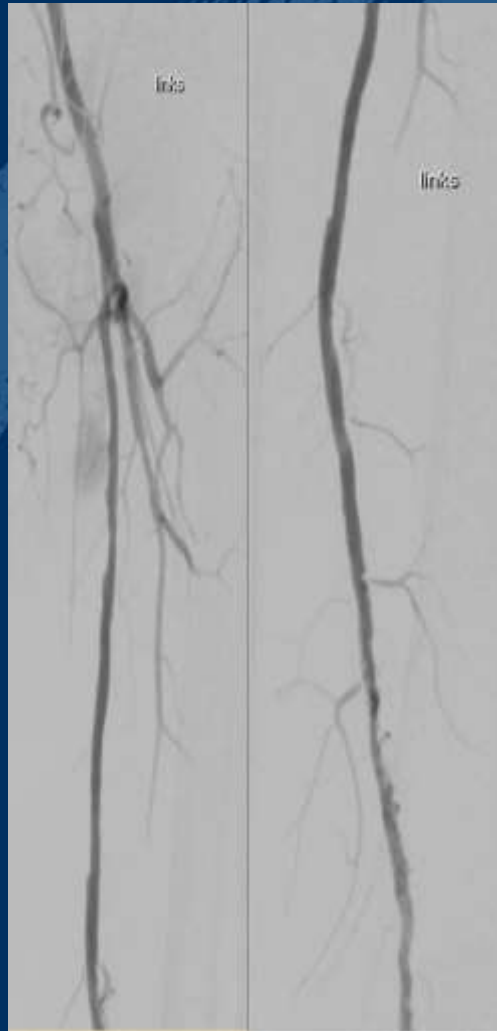
Femoropopliteal Vessels

| Location | DSA (mm) (median) | IVUS (mm) (median) | P-value* |
|------------------------------|----------------------|-----------------------|----------|
| Proximal Superficial Femoral | 5.5 | 6.1 | 0.0001 |
| Mid Superficial Femoral | 5.0 | 5.9 | <0.0001 |
| Distal Superficial Femoral | 4.8 | 5.9 | <0.0001 |
| Proximal Popliteal (P1) | 5.0 | 5.8 | <0.0001 |
| Mid Popliteal (P2) | 4.5 | 5.6 | <0.0001 |
| Distal Popliteal (P3) | 4.0 | 5.3 | <0.0001 |

IVUS Guided treatment



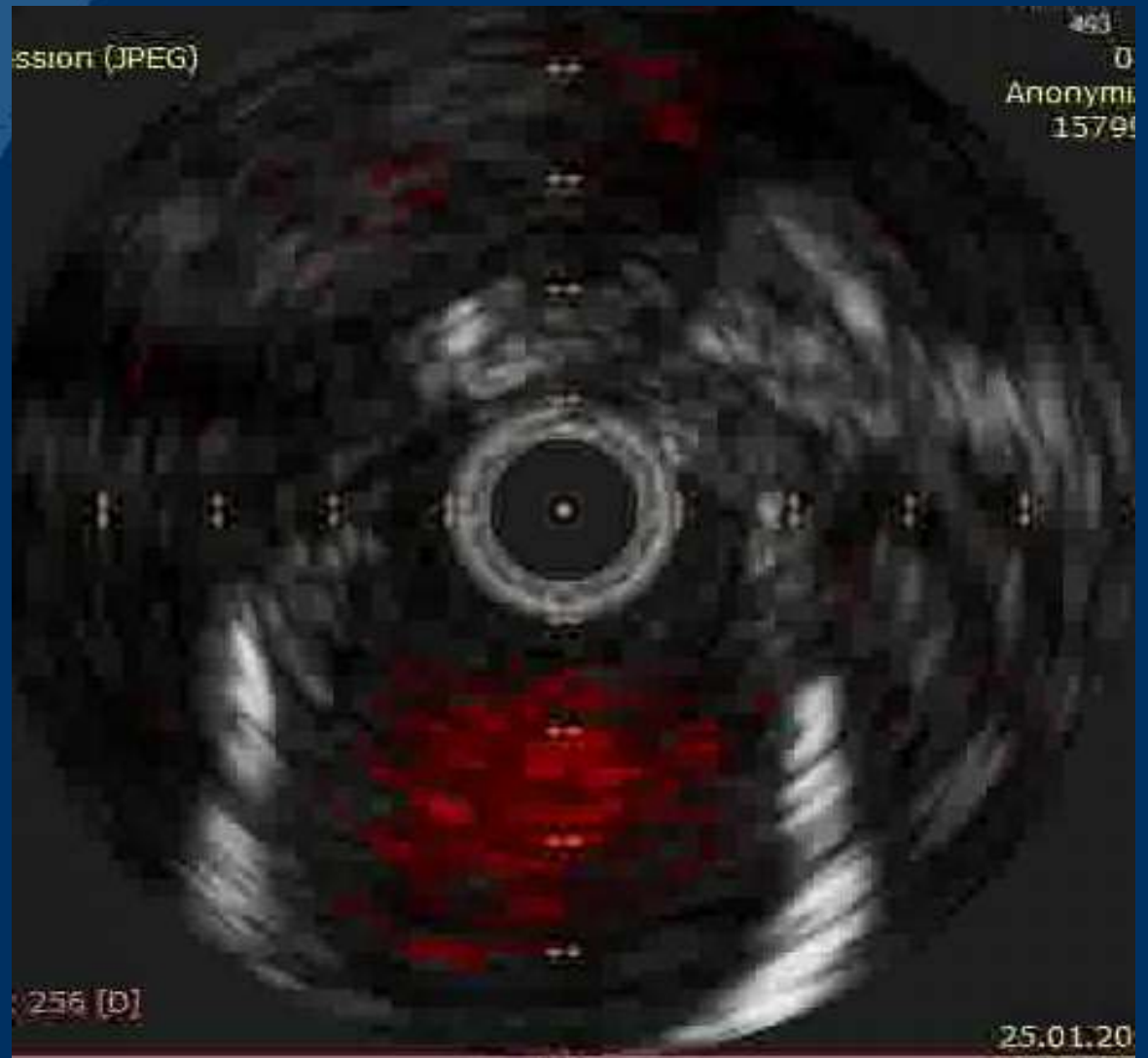
IVUS Guided treatment



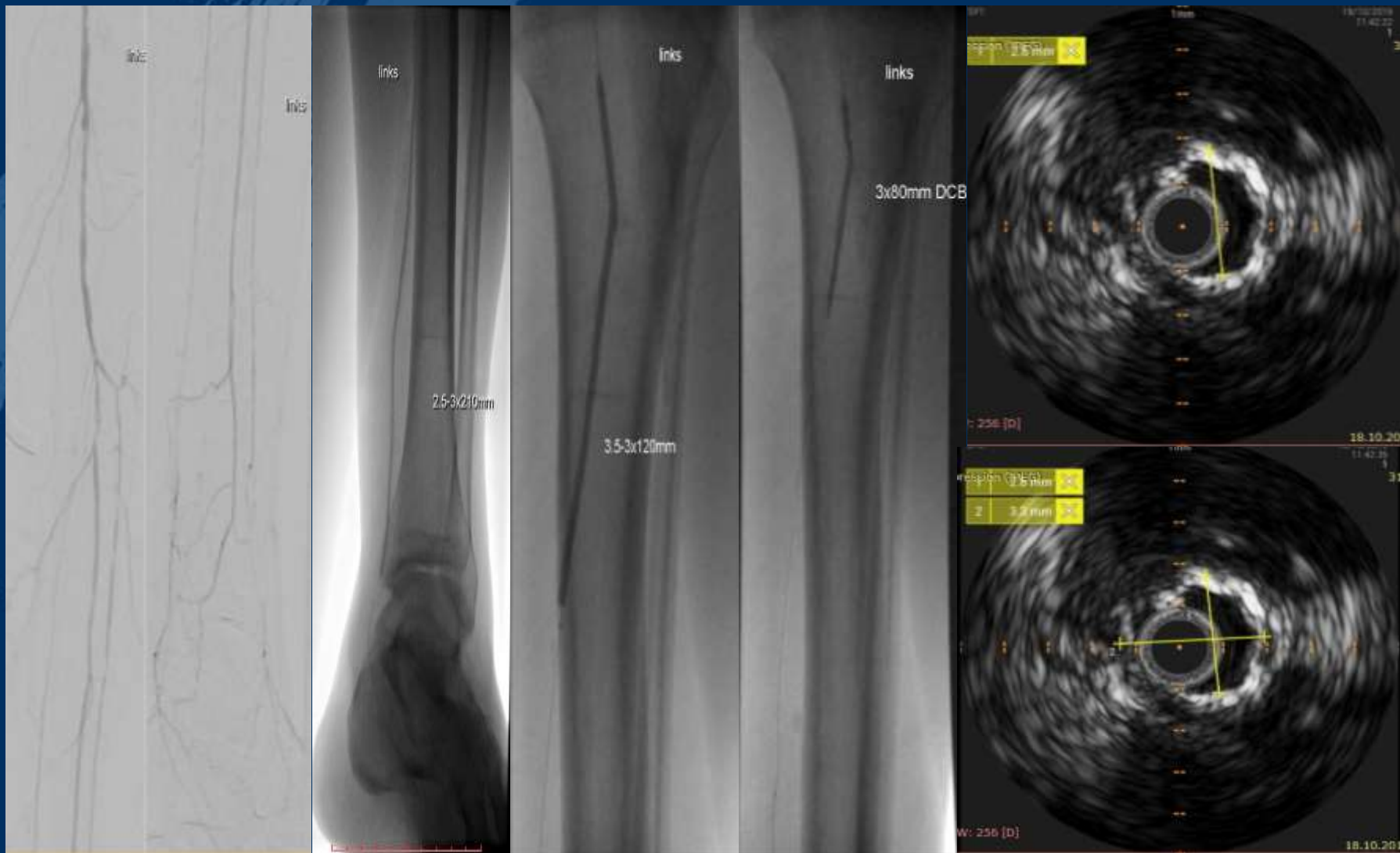
IVUS Guided treatment



IVUS Guided treatment



IVUS Guided treatment



IVUS Guided treatment



IVUS Guided treatment



Conclusions

Still angiogram-based therapy

IVUS can be a valuable tool in order to:

- Assess plaque/lesion morphology
- Guide and control the selected treatment option
- Improve the acute and long term results

LINC

Thank you!



The role of advanced imaging in CLTI

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