

# An Unmet Clinical Need: The History of Thrombus Imaging

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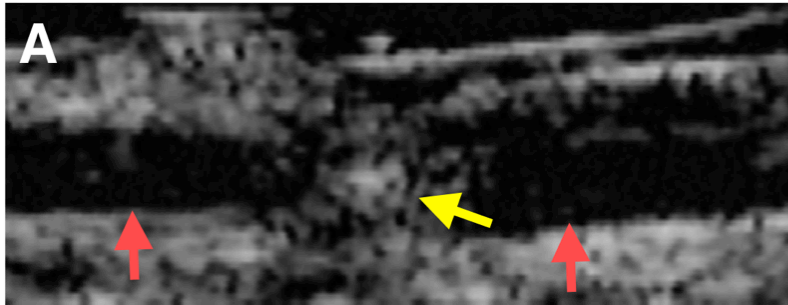


# Overview

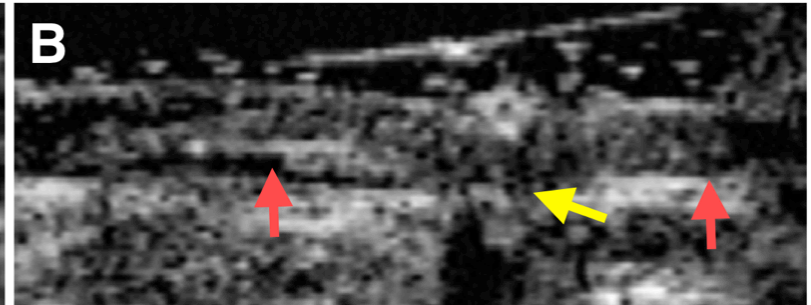
- 1- Robust thrombus imaging is an unresolved clinical unmet need dating back to the mid 1970's.**
- 2- Molecular imaging approaches began with nuclear SPECT imaging, contrast agents for virtually all biomedical imaging modalities have been demonstrated**
- 3-Two primary molecular imaging targets have been pursued for thrombus imaging: platelets and fibrin.**
- 4- Acute thrombus is readily imaged with all probes and modalities, but aged thrombus remains a challenge**
- 5- Anticoagulation continues to interfere and often negates thrombus imaging efficacy**

# Figure 1

Pre-contrast



Post-contrast

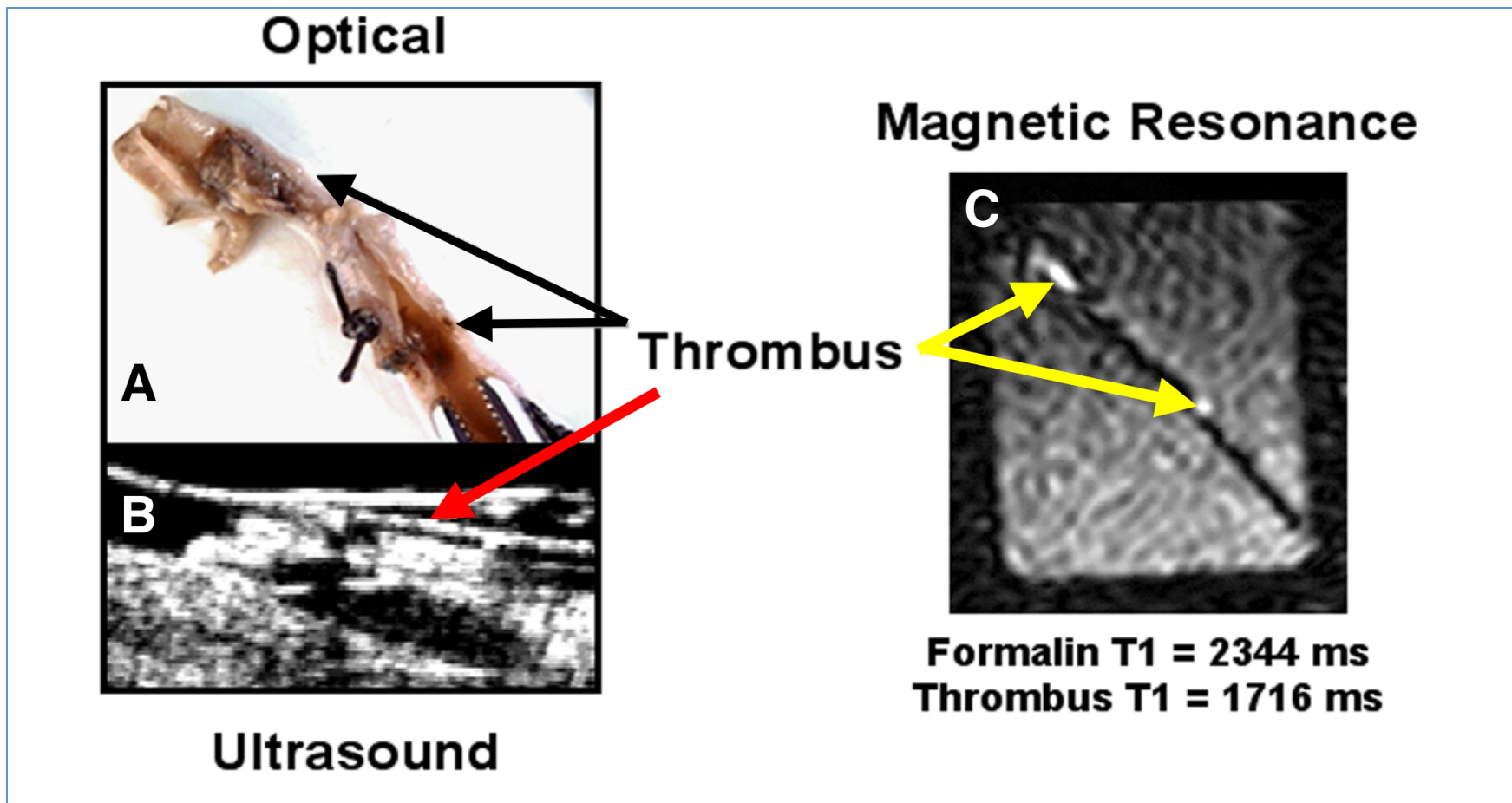


**Acoustic enhancement of canine femoral artery thrombus before (A) and after (B) exposure to targeted perfluorocarbon emulsion. (7.5-MHz linear-array, focused transducer).**

**The transmurular electrode (yellow arrow) Post contrast thrombus is easily recognized (red arrows)**

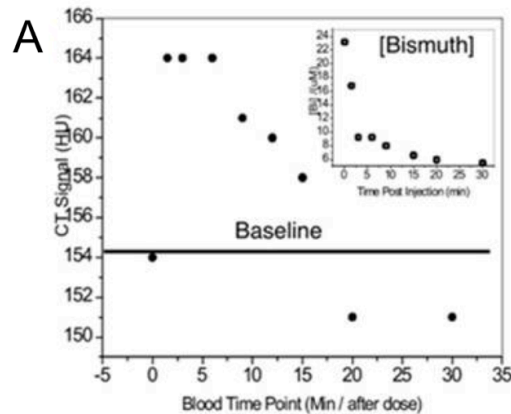
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# Figure 2

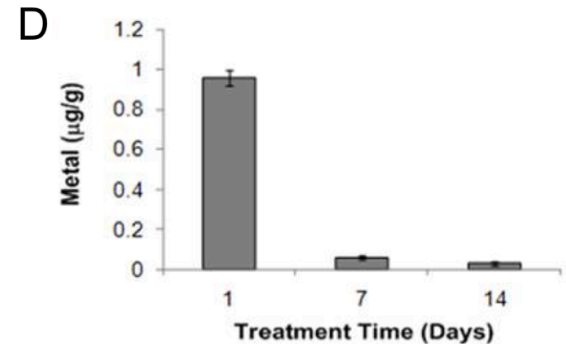
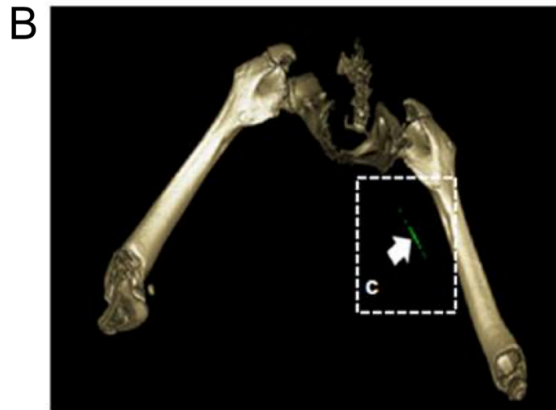


# Figure 3

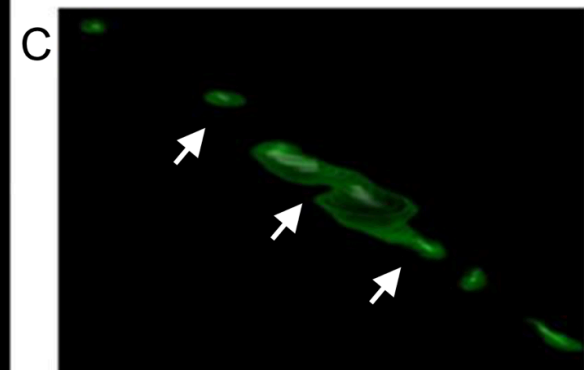
**A. CT blood pool signal in rabbits following IV injection of NanoK.**



**(B-C) targeting in situ clot (thrombus) in rabbits;**



**(D) two weeks clearance profile of bismuth from mice.**



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