

Risks of abandoning a lead

“The more hardware you have in your bloodstream, the higher the risk of long-term infection.”¹

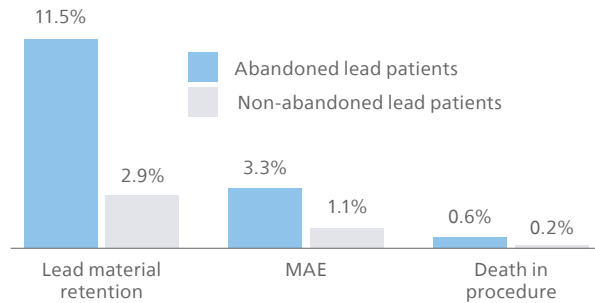
– John Piccini, MD | Duke University

Extended procedures

- Procedural time increases by 55 minutes²
- Fluoroscopy time doubles²
- Femoral rescue is 5x more likely³

Complicated extractions

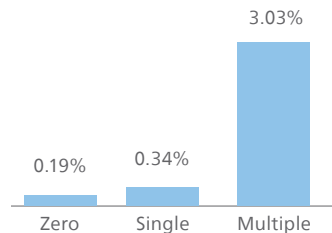
- 2x increase in 1-month mortality due to lead material retention³
- 3x increase in MAE⁴
- 3x increase in death during procedure²



Risks

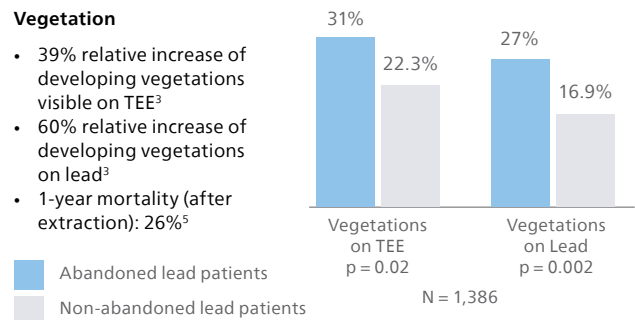
Infection

- 15x increase for infection when multiple leads are capped⁶
- Risk of infection increases to 24.1% by the 3rd procedure⁷
- 41% increase of infection being the main indication when leads are capped³



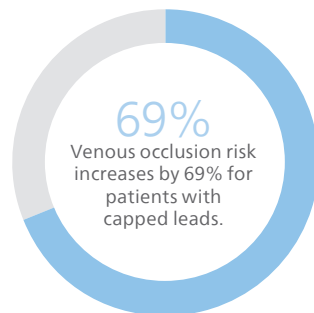
Vegetation

- 39% relative increase of developing vegetations visible on TEE³
- 60% relative increase of developing vegetations on lead³
- 1-year mortality (after extraction): 26%⁵



Occlusion

- Patients with abandoned leads have an increased risk of venous occlusion from 19.5% to 33%⁴



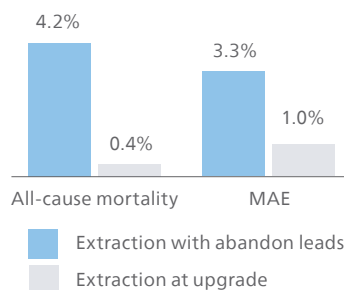
Additional risks

- Abandoned leads are a contraindication for MRI⁸
- 75% of device patients will have a medical need for an MRI⁹
- Increased risk of tricuspid regurgitation and resulting A Fib or heart failure¹⁰
- Lead on lead interaction from abandoned leads can lead to PTSD^{11,12}

Extraction at upgrade^{4,6,13,14}

Compared with general lead extraction, procedures performed at the time of device upgrade were:

- Less complex
- More likely to be successful
- Lower complication rates, despite significantly worse clinical profiles



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