

# When Do Stent Fractures Matter To The Clinician?

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Vascular Innovations

# Obviously When...

- There is Failure or Impending Failure
  - Migration
  - Loss of Seal
  - Branch Vessel Compromise
  - Aortic Wall Integrity Issues

***When The Fracture My Lead to Patient Harm***

# Engineering Perspective

- Applied Loads
- Frequency of Loads
- Failure Location

# Engineering

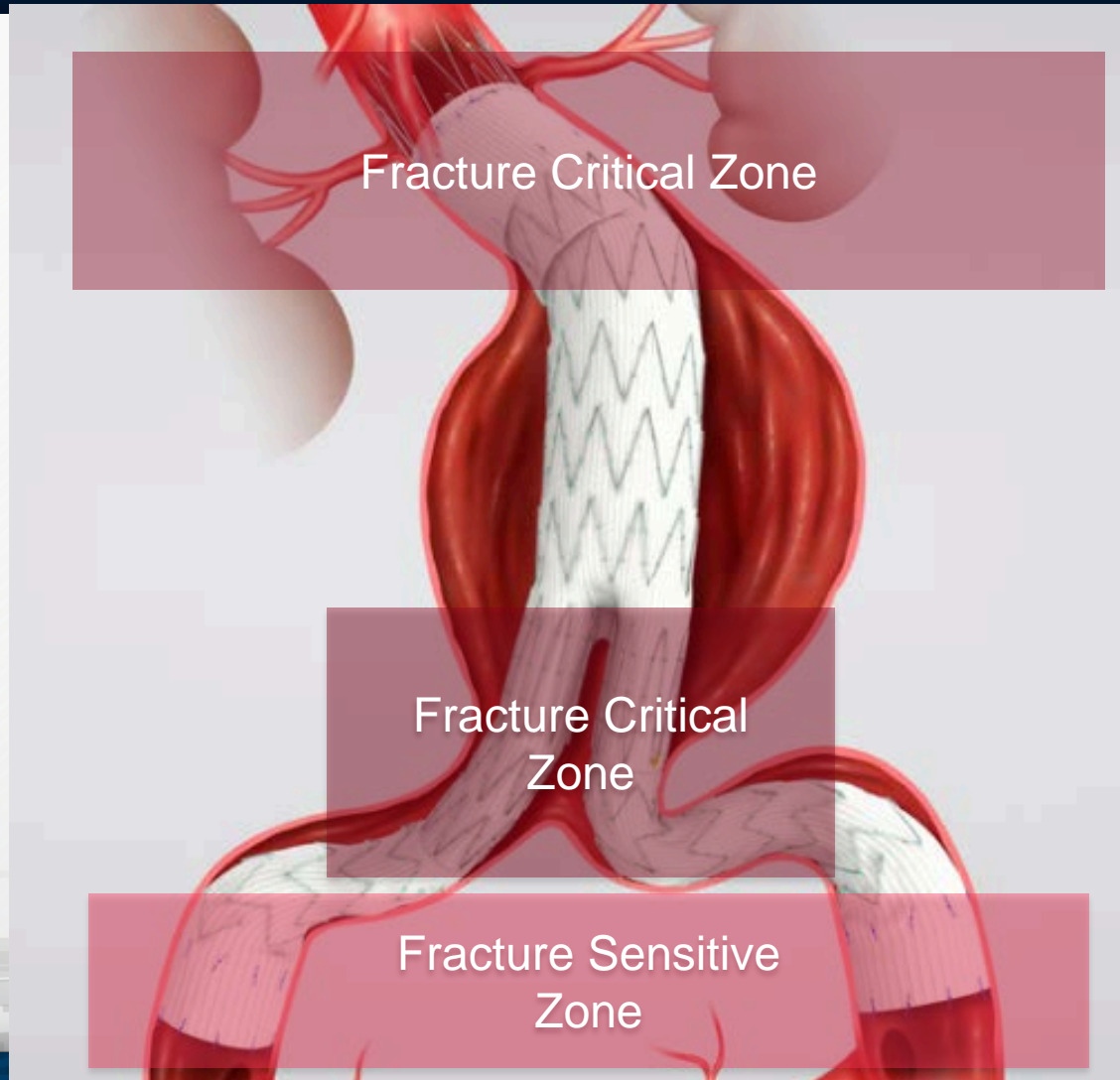
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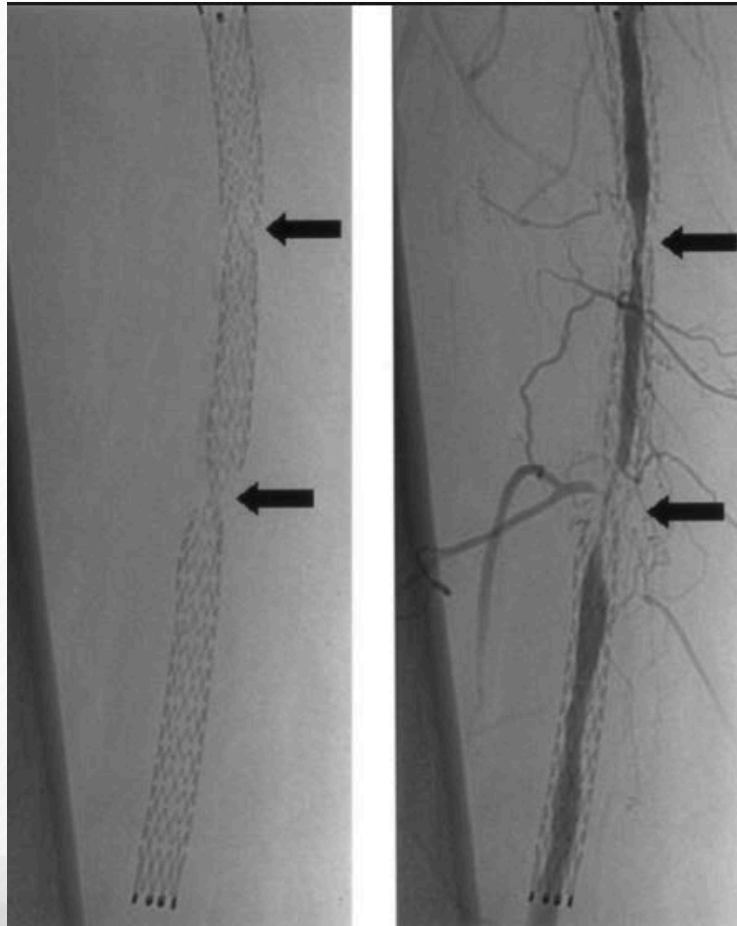
# Engineering

- Location of Failure
- Duration of Failure

# Engineering

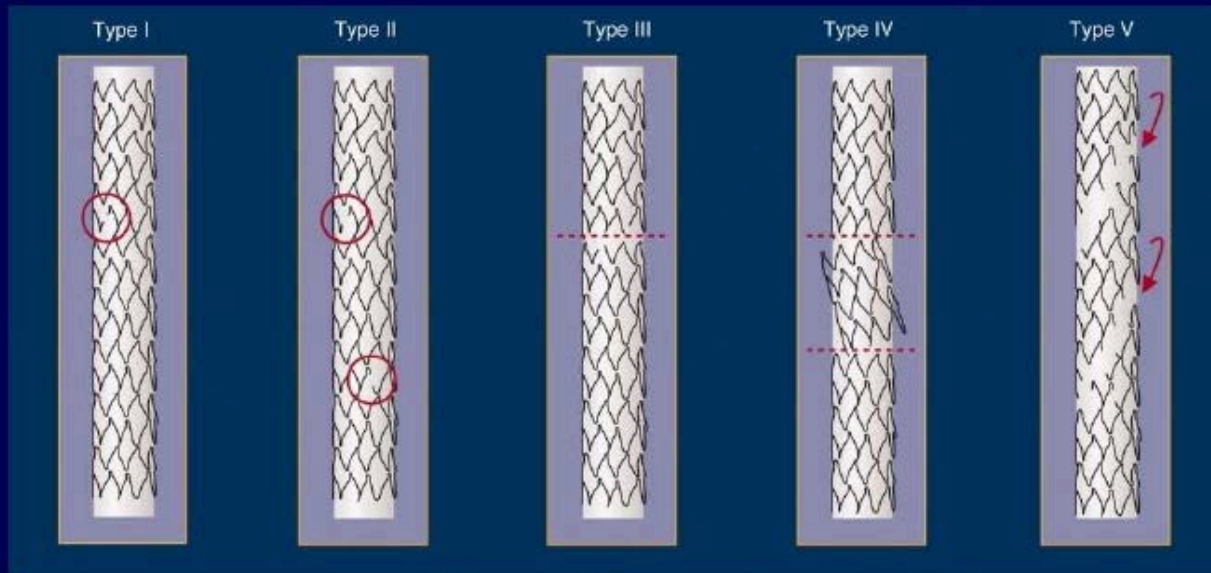


# Clinical Relevance



# Clinical Relevance

## Classification





# Clinical Relevance

Mechanical failure of prosthetic human implants: A 10-year experience with aortic stent grafts... TS Jacobs et al. J Vasc Surg 2003

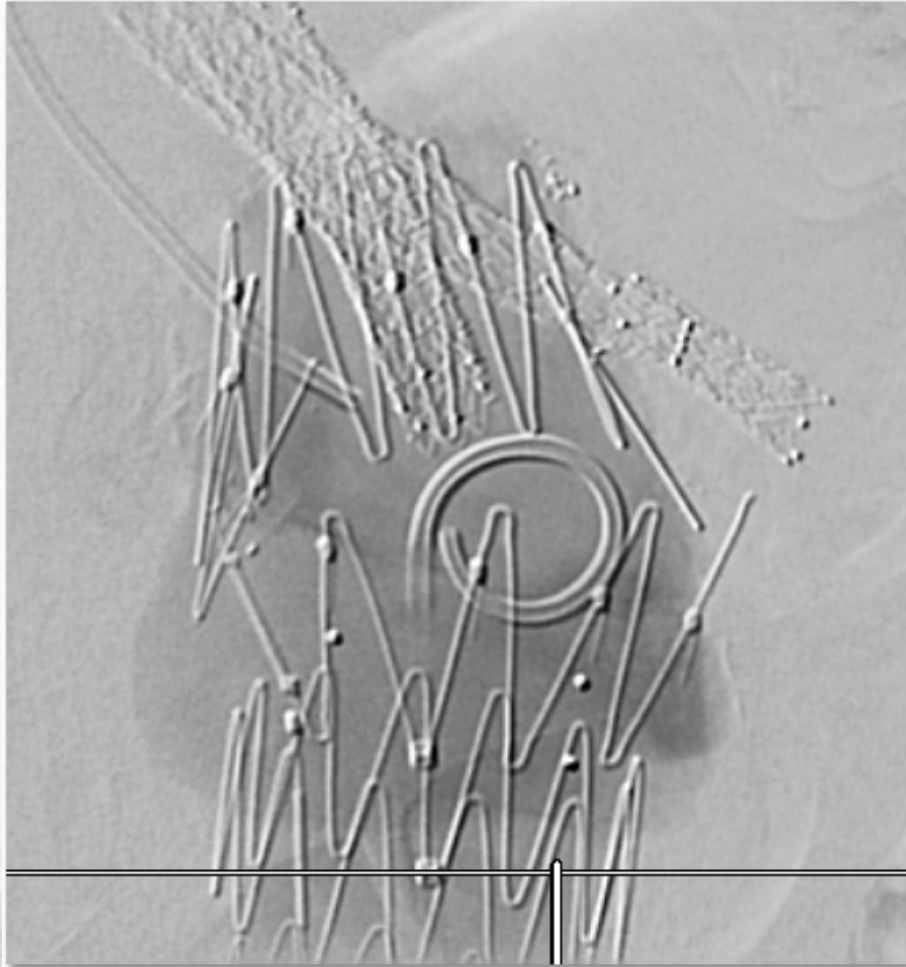
- 686 patients
  - 42 infrarenal graft
  - 11 thoracic grafts
- 60 patients with integrity issues
  - 43 (6.3%) stent fracture
- 3 (.44%) device related mortalities

# Clinical Relevance

- Endovascular Stent Graft Repair of Abdominal and Thoracic Aortic Aneurysms A Ten-Year Experience With 817 Patient..Marin ML, et al. Ann Surg 2003
- 817 patient treated
- 64 (7.8%) patient with stent fracture
- No death attributed to device integrity

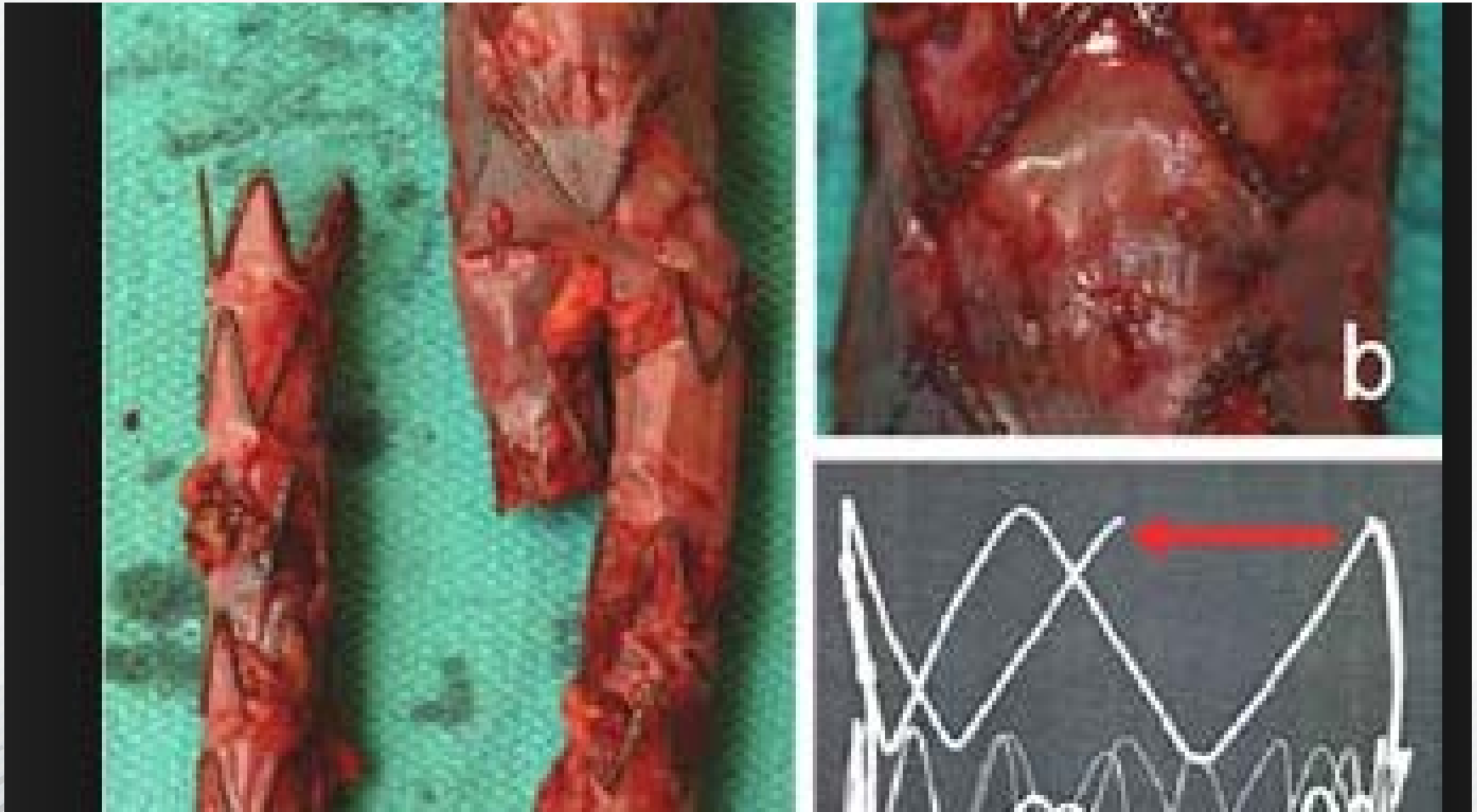
# My Experience







# Clinical Results

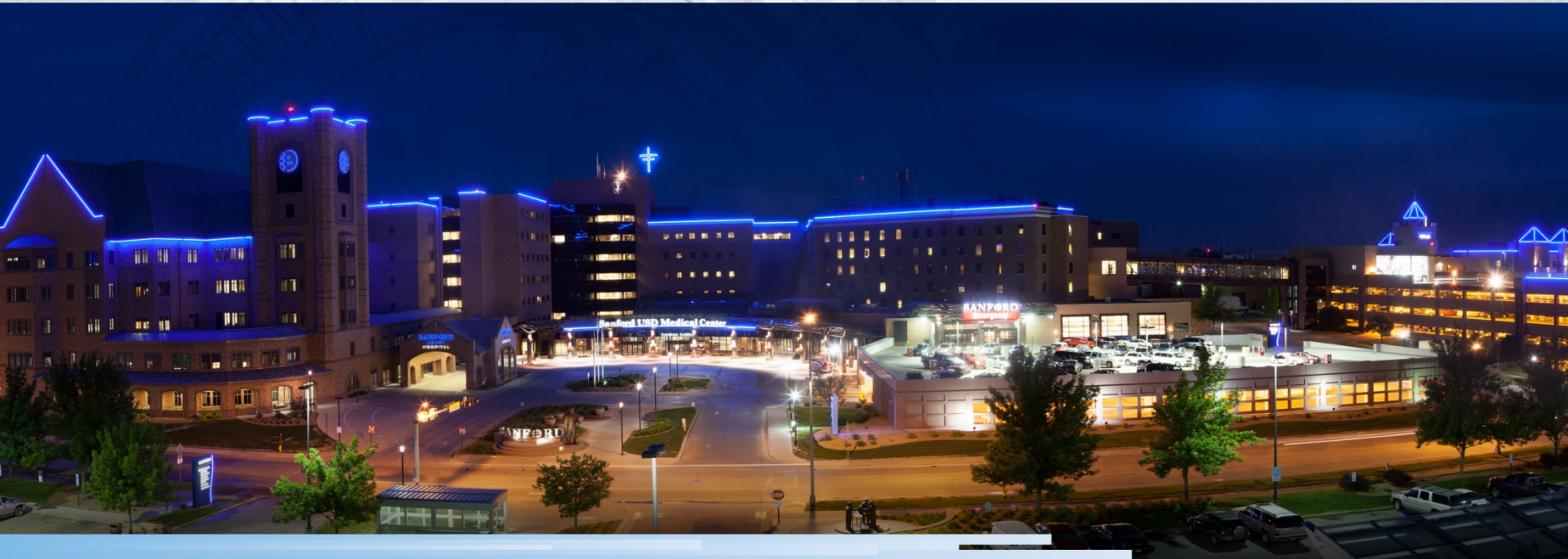


# Conclusion

- Serious Complications From Stent Integrity Issues Can Occur With Current Stent Graft Systems. The Incidence Is Low And I Would Seriously Question Spending A Great Deal Of Time And Money On This Issue

# Questions/Discussion





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