RadBase: Medical Imaging Database for Industry Research and Development

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Background

- Medical device companies need patient imaging (Xrays, CTs, MRIs)
  - To develop and validate 3D modeling
  - To develop and validate AI prediction tools
- The device industry struggles to assemble adequate amounts of commercially available patient imaging data
  - They have expressed a great need for large amounts of high quality data.
- While many image databases exist, the majority are limited for academic research purposes
- Device companies cannot use existing academic databases because patients did not consent to have their data used commercially
Background

- Medical device companies pay hospitals for small datasets
  - Hundreds of dollars per patient
  - Limited control over which images they receive
  - Very difficult to control for medical history

- The growth in personalized medicine means:
  - More companies are developing devices that require datasets to influence design
    - AI development requires very large quantities of data
  - More applications
  - Significantly increased need for patient images

- Untapped $100 million market
  - Will only increase
  - There are currently no commercial players in this space
What is RadBase?

● Large repository of medical imaging that can be licensed to medical device companies
  ○ Images include X-rays, CTs, MRIs
  ○ Can be used for research
● Patients have been compensated and given consent for this data to be used for commercial purposes
● Images are tagged with additional information
  ○ Comorbidities
  ○ Demographic background data
  ○ Includes both healthy patients and those with pathologies
Current Academic Database

Limit your search

Location
- Left Knee Joint: 35
- Right Knee Joint: 33
- Elbow joint: 10
- Knee: 5
- Patella: 3
- Femur: 1

Age
- Below 25: 13
- 25 to 50: 3
- Over 50: 62

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3D Medical Image Library
RadBase team

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Future goals

- Build out data collection infrastructure
- Streamline data entry tools
- Develop interface for companies to request and explore data
- Licensing / Legal development
- Create blockchain data tags to protect data