



CLUBMEDAI INTRO

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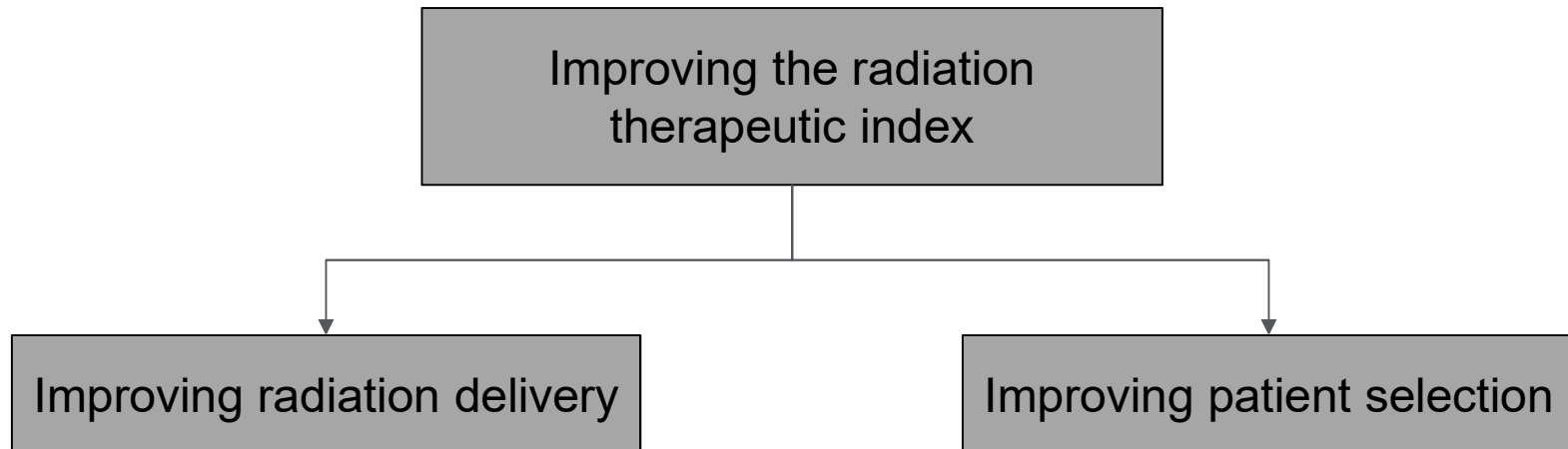


A little about me...

- Northwestern MSTP
- UCLA Radiation Oncology
- NYU Radiation Oncology Faculty (9/2020)



A little about my interests...

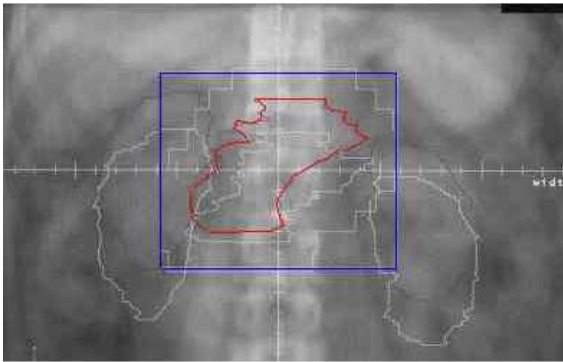


Improving the therapeutic index of radiation

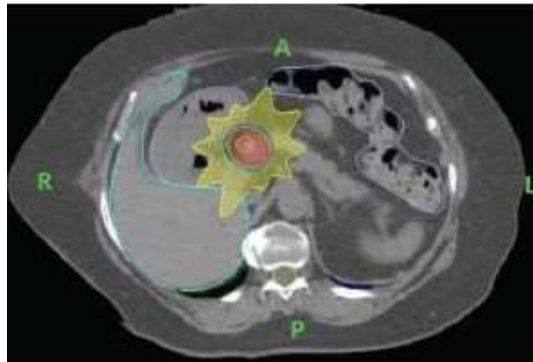
Improve radiation delivery

- Deliver higher doses to smaller areas
- Limitations:
 - Normal organ radiation tolerances
 - Ability to see and adapt to anatomic changes
- Opportunities for AI/ML especially in MRI guided RT (MRgRT)

2D: X-ray

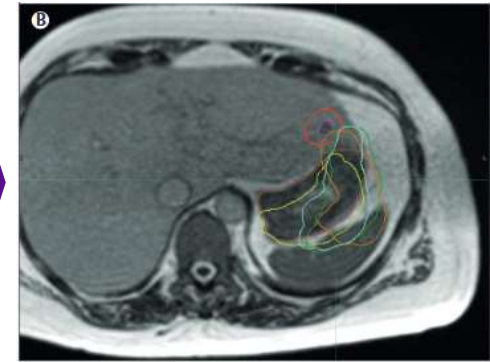


3D: CT



Bourlon Oncology 2014

Real-time: MRI

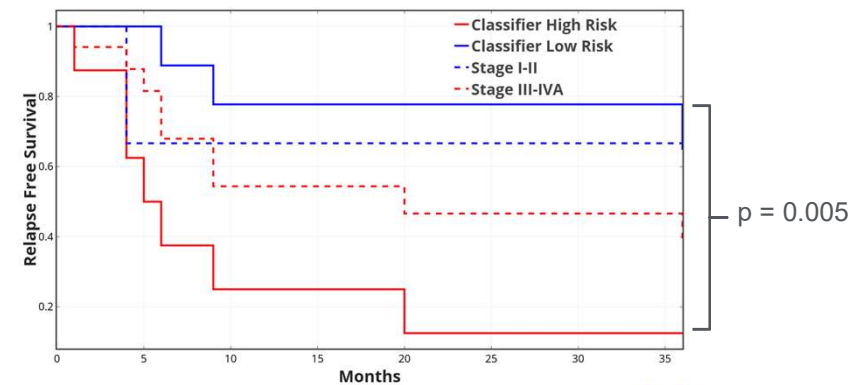
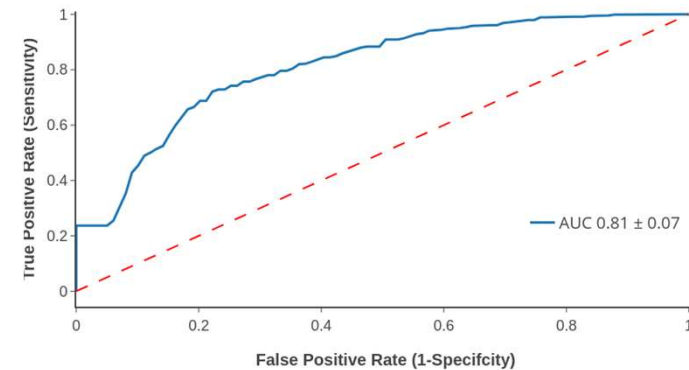
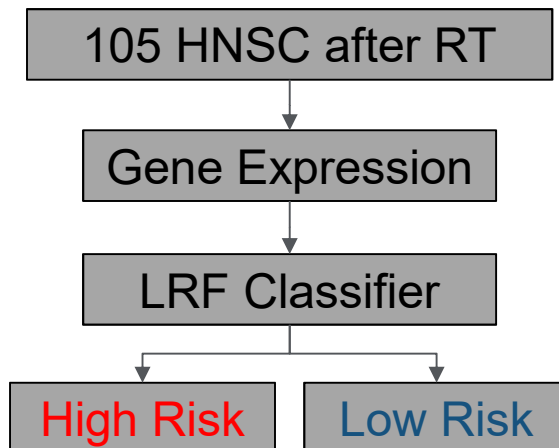


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Improving the therapeutic index of radiation

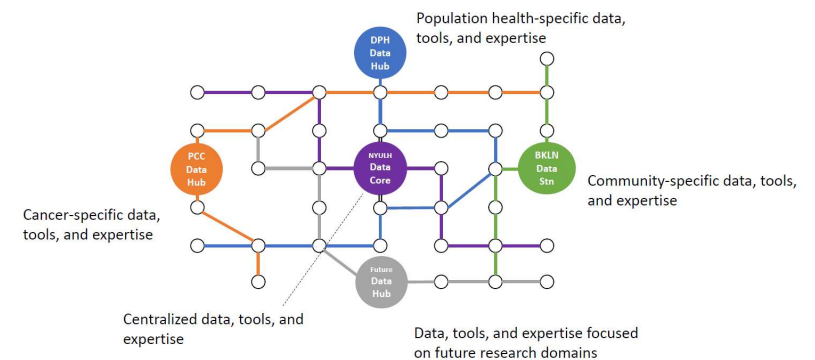
Better patient selection

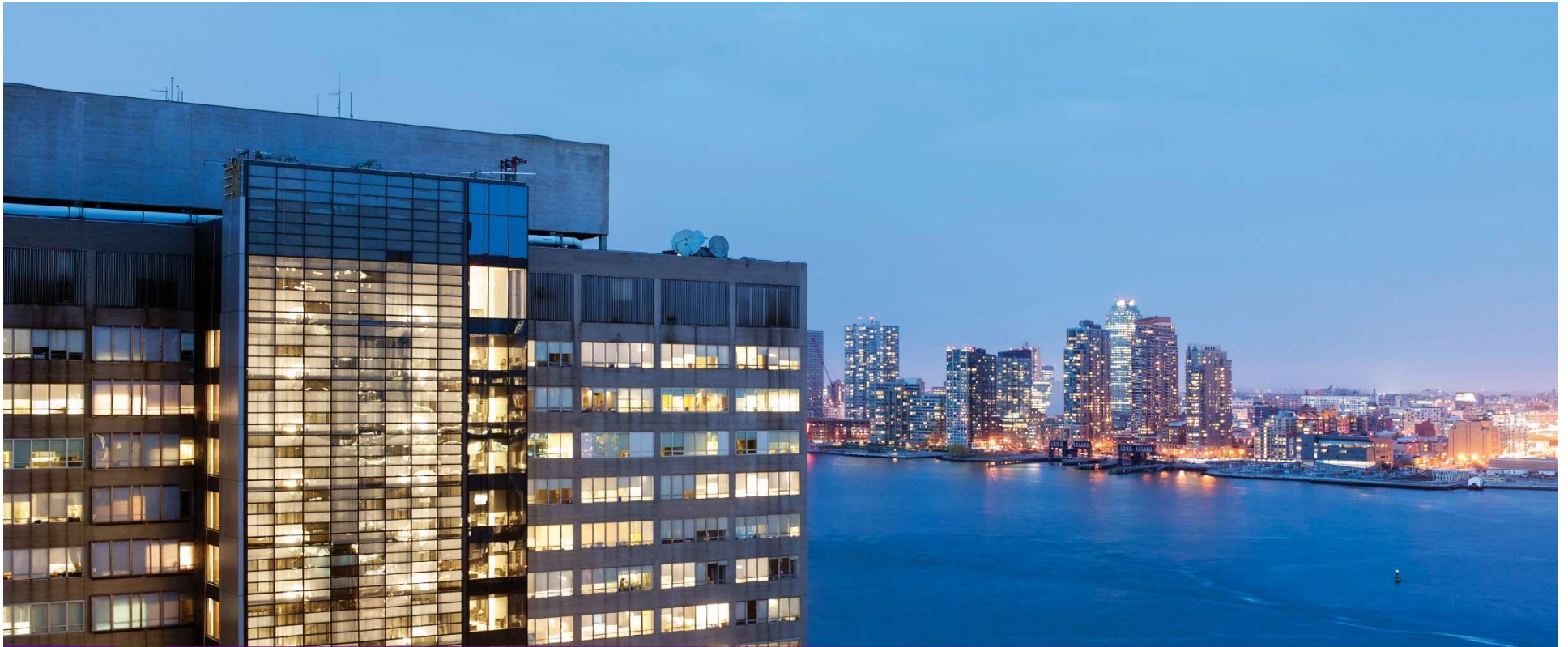
- A significant number of patients fail locoregionally following RT
- Few robust methods of stratifying patients by risk of treatment failure



A little about what drew me here...

- AI/ML needs (good) data for training and validation
 - NYU Enterprise-wide Big Data Platform (Hadoop)
 - PCC Datahub (led by Megan Winner MD)
 - >300,000 patients
 - Potential to integrate with molecular/NGS data
- Departmental adoption of MRI guided radiation in near future
- Rich institutional expertise in research and deployment of AI/ML





THANK YOU

