



# Applying AstroGrid techniques to the analysis of tissue microarrays

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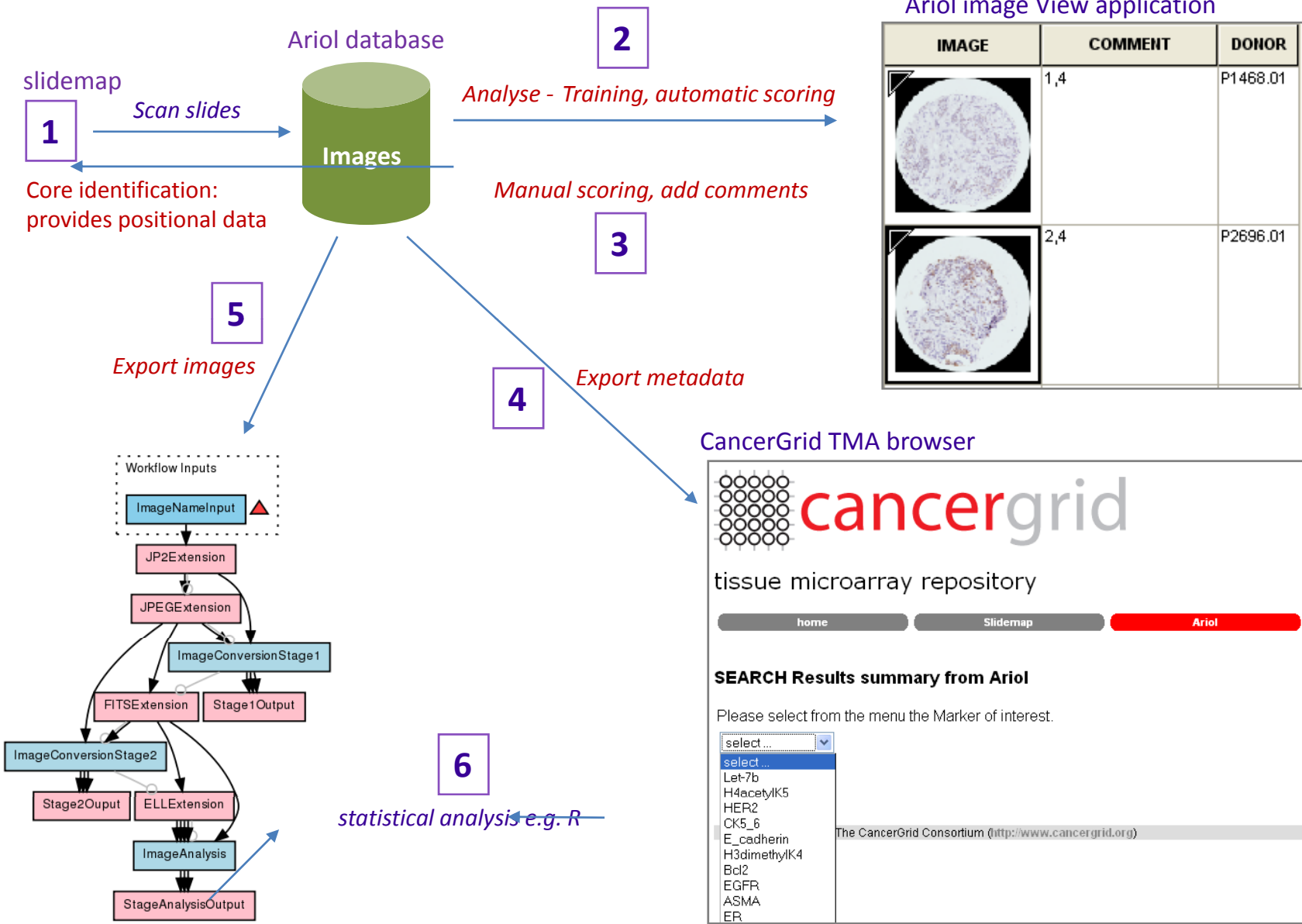
*[www.cancergrid.org](http://www.cancergrid.org)*

## Approach - AstroGrid: adapted for 'PathGrid'

- overcome bottleneck of manual pathologist scoring of TMAs
- apply techniques developed for astronomical image analysis to the analysis of tissue microarrays (TMAs)
- Transfer technologies/ expertise from the Astronomy to Medical domain
- Pilot MRC funded program supporting Breast Cancer research:
  - TMA core images +
  - astronomy image analysis +
  - astronomy data/ database access technologies

Key aim of our work:  
enable the discovery of more 'predictive' markers

# Workflow – from tissue core tracking to results analysis



# Future Directions

- **Current work demonstrate utility of processing and scoring of this test case**
  - paper in preparation describing use of astronomy image analysis software to automate generation of ER scores
- **Next step**
  - extend to larger sample sizes
  - ingress results (thousands of samples) to database
  - Modify “scoring” algorithm for other markers
  - interface to CancerGrid clinical trial system
    - automate 'pipeline' from image analysis to integration with clinical data and statistical analysis

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