

# Digital Pathology

Improving Disease Diagnosis and Treatment Outcomes  
Anywhere, Anytime



Using Image Analysis in Conjunction with Workflow to Optimize the Benefits of Digital Pathology

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# Digital Pathology

Automating the manual process of Pathology

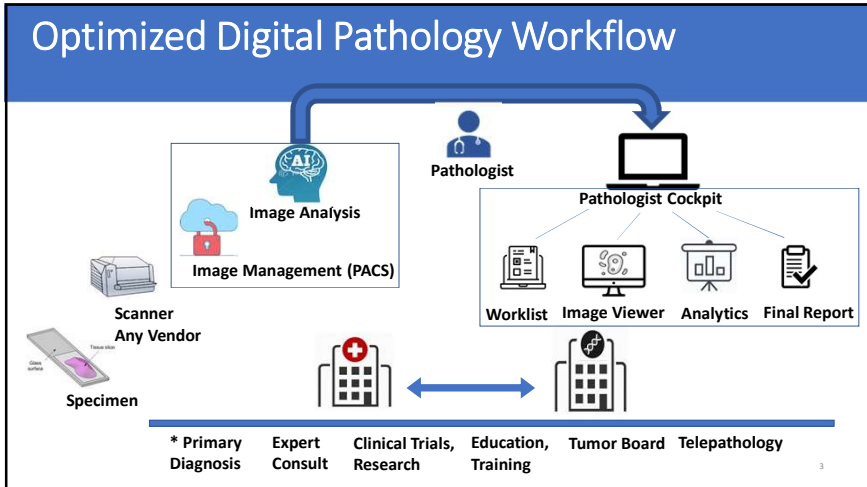
A digital pathology platform will transform anatomic pathology laboratories from glass slides, microscopes and couriers to an automated, electronic digital workflow

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# Digital Pathology Components

- Scanners
- Image Management
- Viewers Reporting
- Voice Recognition
- Artificial Intelligence
- Image Analysis
- Integration

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## Important Factors to Consider for Digital Pathology Adoption

- **Proven Partner**
  - History of successful delivery
  - Strong working relationship with other vendors
  - Respect of other vendors/recognized for value in the space
- **Strong Expertise**
  - AI – Current relationships
  - Open approach to working with other modules, vendors, applications
- **Team**
  - Industry experts in lab, pathology applications, workflow
  - Ability to provide long-term, ongoing support and development as your specific needs and the industry grows and adapts
- **Pricing**
  - Flexibility in meeting your needs – capital/operational/SaaS
- **Industry Participation/True Interest**
  - Members of appropriate associations (Digital Pathology Association, Association of Pathology Informatics, CAP, etc.)

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## Benefits of Digital Pathology

- **Remote locations**
  - Remove expense of shipping, packaging, breakage and loss of glass
- **Ease of working with internal AND external education centers**
  - Open and instant access for sharing, collaboration, teaching
- **New Markets**
  - Expand market reach geographically with no additional infrastructure cost
  - Increase market share by adding regional, rural facilities
  - Provides services for underserved/accessible populations
  - Replace locum tenens and traveling pathologists for remote locations
- **AI and Image Analysis**
  - Increase efficiency, accuracy, TATs
  - Maximize the value of the Pathologists (remove tedious, time consuming, manual work)
  - Auto triage- Machine + Pathologist = better than either alone
- **Efficiency Gains**
  - Pathologist efficiency gains based upon reduction in paperwork, working in multiple systems, searching for case information
  - Transcriptionist, admin reduction in time

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## Artificial Intelligence And Image Analysis

- **What AI is**
  - The use of complex algorithms and software to emulate human cognition in the analysis of complicated medical data.
- **What AI is**
  - A Pathologist or human
- **What Image Analysis is**
  - Pattern recognition and identification
- **What Image Analysis isn't**
  - A Pathologist or human

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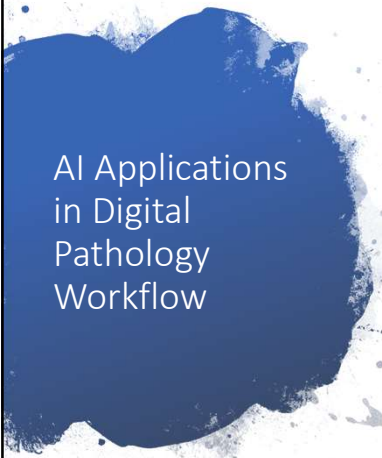
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## Artificial Intelligence And Image Analysis

- **AI and Image Analysis Combined**
  - Increase efficiency, accuracy, TATs
  - Maximize the value of the Pathologists (remove tedious, time consuming, manual work)
  - Auto triage- Machine + Pathologist = better than either alone
- **Efficiency Gains**
  - Pathologist efficiency gains average of 10-20% based upon reduction in paperwork, working in multiple systems, searching for case information, reduction in paperwork
  - Transcriptionist, admin reduction in time – 20-40% for FTEs

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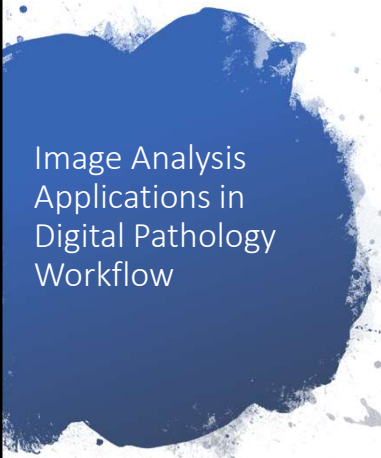
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## AI Applications in Digital Pathology Workflow

- Detection
- Segmentation
- Diagnosis
- Applications available today for
  - PDL1
  - Breast
  - Dermatology
  - Prostate
  - Many others but above are most common

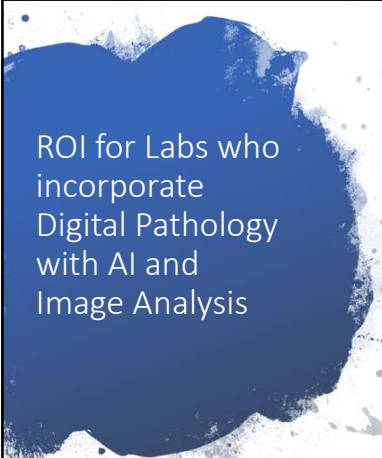
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## Image Analysis Applications in Digital Pathology Workflow

- Image viewing workflow
  - Auto-orientation
  - ROI registration
  - Synchronized image viewing
- Case routing using real-time image analysis to triage case
  - Complexity
  - Urgency
  - Sub-specialty


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## ROI for Labs who incorporate Digital Pathology with AI and Image Analysis

- ROI as defined by hard dollars saved or added
  - Shipping
  - Courier
  - Increased market reach
  - Outreach business for PC
  - Image bank rental for AI/Image Analysis development
- ROI as defined by efficiency and workflow/workload gains
  - FTE reduction
  - Increased volume
  - Higher accuracy
  - Patient safety
  - Improvement in TATs

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## Summary

- Digital Pathology Streamlines Workflow, Increases Efficiency, Accuracy and Turn Around Times
- Digital Pathology is necessary for AI and Image Analysis
- Digital Pathology combined with AI and Image Analysis speeds the time to a specific diagnosis for patients – improving their outcomes

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Questions?

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