



AIRA
M A T R I X

Artificial Intelligence
Transformed Analyses

Preclinical Solutions



About Us

We deliver cutting-edge artificial intelligence solutions for healthcare and life sciences applications. Our innovative products and services drive efficiency, enhance diagnostic accuracy, and provide data-driven insights from digitally scanned images.

Drug Discovery & Preclinical Research

Our comprehensive AI-driven suite for drug discovery and development, streamlines pre-analytical quality control, facilitates tissue triage, and optimizes safety and efficacy assessments, accelerating breakthrough discoveries.

Healthcare Solutions

Our healthcare portfolio offers diagnostic, prognostic, and predictive tools that facilitate risk stratification and enable personalized therapy planning, thus improving treatment outcomes.

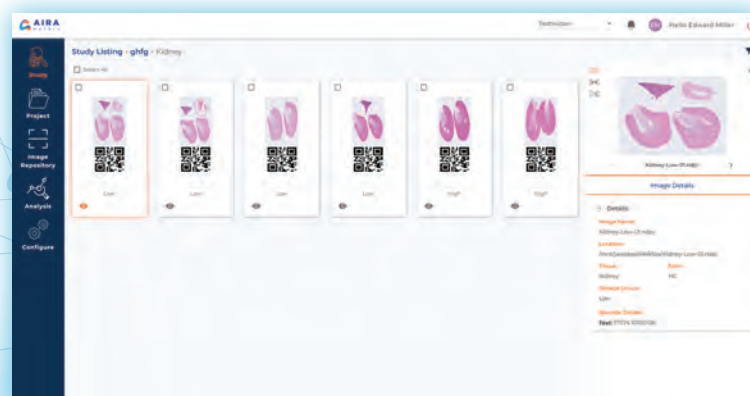
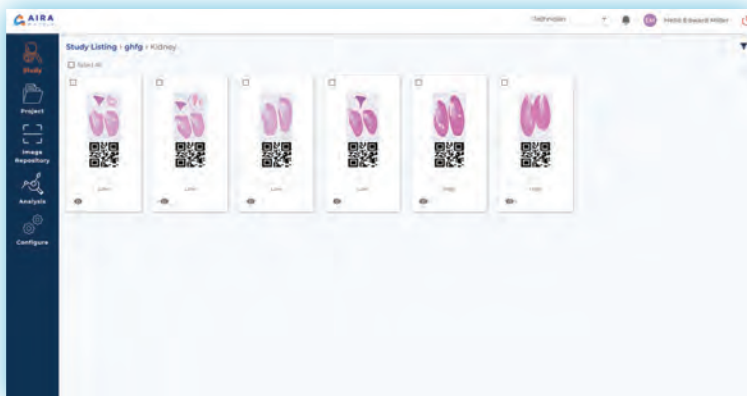
Write to solutions@airamatrix.com for more

AIRADHI

GLP-Compliant Browser-Based Image Management System

Seamlessly manage WSIs, study information, and AI-driven image analysis results within a secure and centralized platform

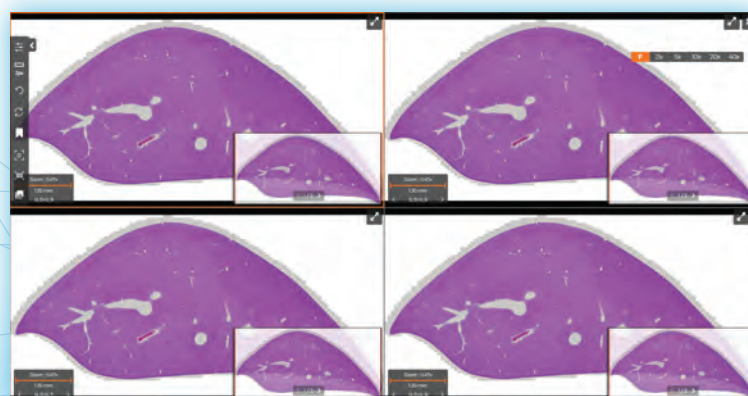
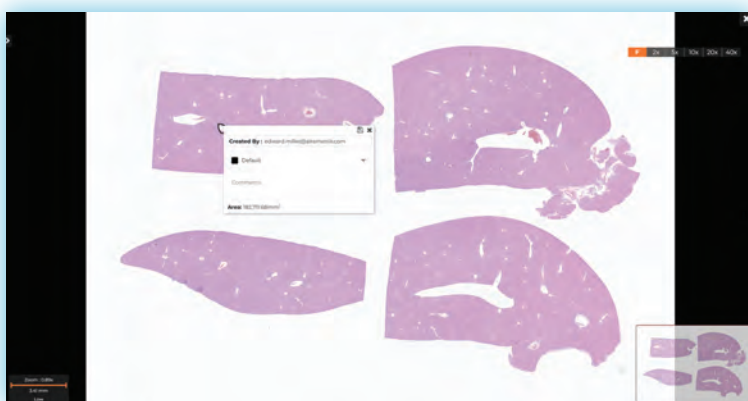
- ✔ **Study Information Management**
Effortlessly manage study data, including animal details, dosage information, and slide records
- ✔ **Stream Images Directly**
Interact seamlessly with the source image, eliminating the need for repetitive uploads and downloads, reducing storage demands, and minimizing delays
- ✔ **Image and Metadata Mapping**
Map images and corresponding metadata to their respective studies for image organizational efficiency
- ✔ **Advanced Viewer Capabilities**
Utilize features including hands-free navigation, annotation tools, and synchronized image comparison for ease of viewing and analysis
- ✔ **Report Generation**
Create reports in customizable formats for both manual or automated image analysis



AIRADHI

Specifications

Components	Image Viewer, Image Management System, Image Analysis Solutions
Deployment	Cloud, On-Premise
Scanner Agnostic	Compatible with multiple image formats and scanners
Study Mode	Manual, Auto
Compliance	21 CFR Part 11
Image Management	Mapping of images and metadata to studies with easy search and navigation
Collaboration	Real-time communication and license-free sharing of WSIs for peer review
Report Generation	Manual Entry, AI-Generated

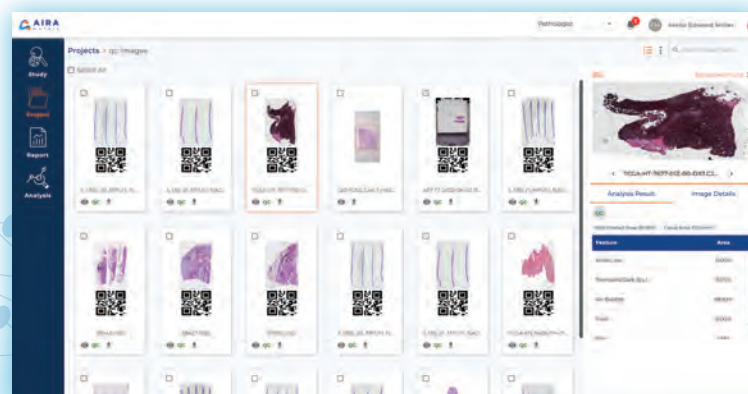
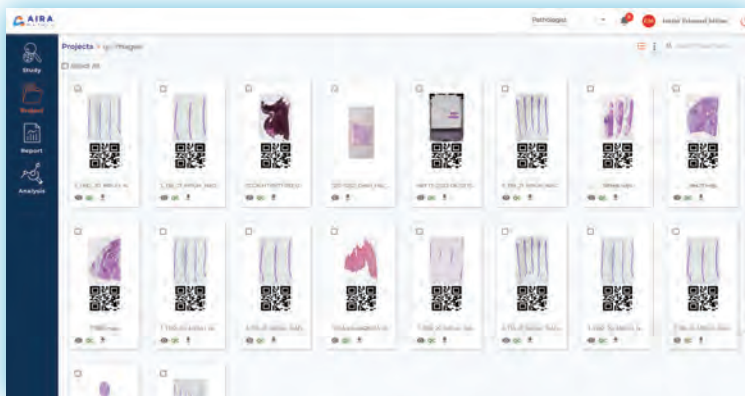


AIRAQc

Identification and Quantification of Artifacts in WSIs

Automate pre-analytical quality checks by flagging images for reprocessing or rescanning based on predefined thresholds

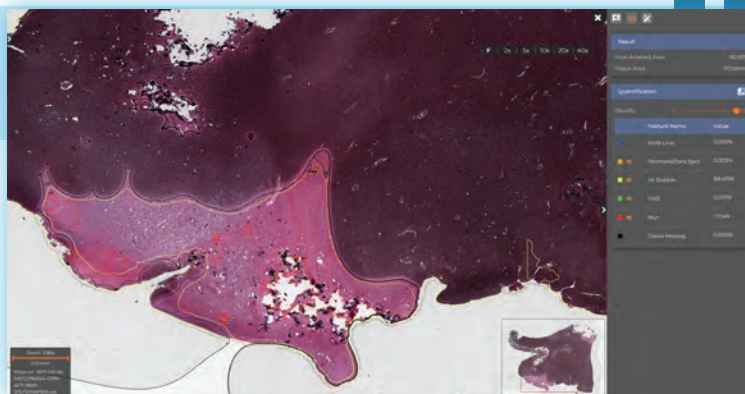
- ✓ **High Performance**
Achieve 95% sensitivity and 96% specificity, with a throughput of 10 WSIs per minute (1GB each) for fast and accurate analysis
- ✓ **Comprehensive Error Detection**
Analyze WSIs to detect and quantify scanning and processing artifacts
- ✓ **Customizable Thresholds**
Configure preset threshold profiles for various stains, tissue types, and organs to automatically flag images as accept, reprocess, or rescan
- ✓ **Detailed Analytics**
Generate detailed analytics about artifact quantification for insight into the overall WSI quality across your digitized pathology lab
- ✓ **Seamless Integration**
Easily integrate with existing digital pathology workflows to streamline quality control without disrupting routine operations



AIRAQc

Specifications

Scanner Agnostic	Compatible with multiple image formats and scanners
Analysis Mode	Auto, Manual
Stains	H&E, IHC
Deployment	Cloud, On-Premise
Artifacts Detected	Out of Focus, Missing Tissue, Tissue Fold, Pen Marks/Dark Spots, Air Bubbles, Coverslip Line, Knife Line, and No Tissue
Species	Agnostic
Export Results	CSV, Excel

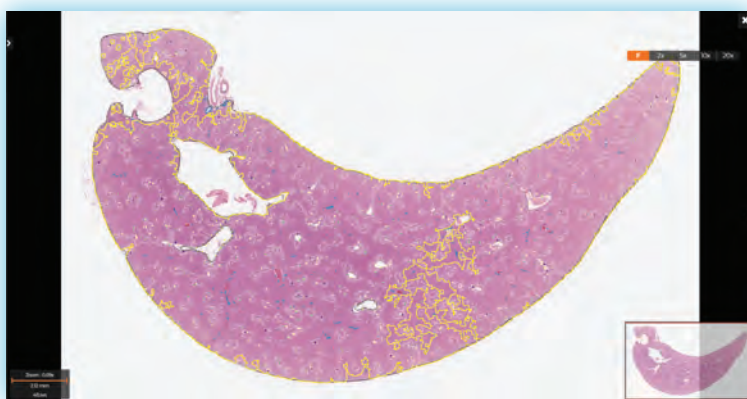


AIRATox

Triage and Reporting for Safety Assessment Studies

An all-in-one AI solutions suite with modules for artifact detection, tissue triage, and abnormality quantifications

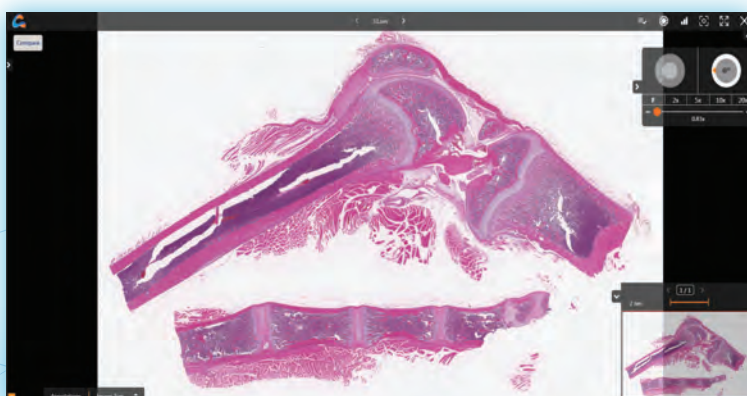
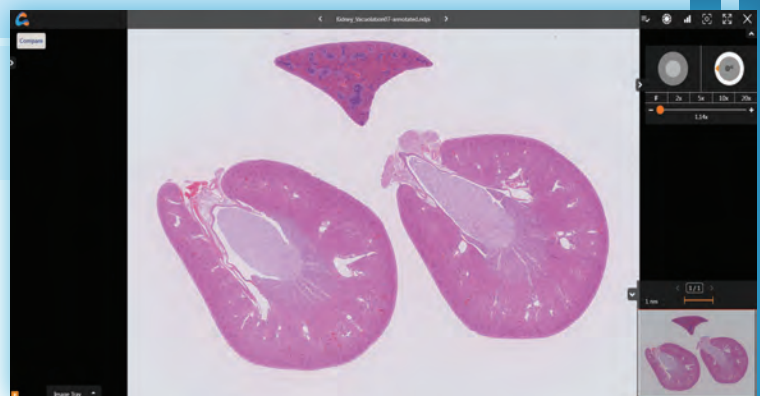
- ✓ **Artifact Detection**
Identify and quantify processing and scanning artifacts in WSIs to ensure downstream toxicologic pathology analysis
- ✓ **Tissue Triage**
Triage not-normal images using concurrent or historical controls, with anomaly scores and heatmap showing the deviation from normal distribution
- ✓ **Abnormality Quantification**
Detect, annotate, and quantify histopathological abnormalities using pre-trained models
- ✓ **AI-Powered Primary & Peer Review**
Enhance toxicologic pathology analysis with AI-driven tools that support primary review and peer review workflows for greater efficiency, consistency, and confident decision-making
- ✓ **Processing for High-Throughput Studies**
Efficiently analyze large sets of WSIs, enabling scalable toxicologic pathology assessments for preclinical studies



AIRATox

Specifications

Components	Image viewer, Image management system, and modules for quality control, tissue triage, and abnormality quantifications
Analysis Outputs	Anomaly Scores, Heatmaps, Quantitative Results, and Annotations
Analysis Mode	Auto, Manual
Stains	H&E, IHC
Deployment	Cloud, On-Premise
Species	Rat, Monkey
Organs	Brain, Heart, Liver, Kidney, Spleen, Lymph nodes, Testes, Ovaries, Uterus, Vagina, Bone marrow, Thymus, Lung, Adrenal, Epididymis, Skeletal Muscle
Export Results	CSV, PDF

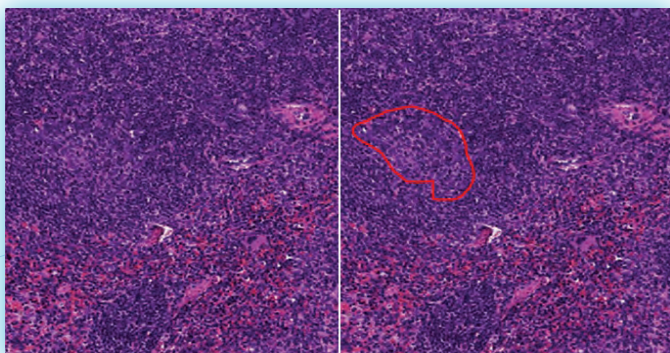
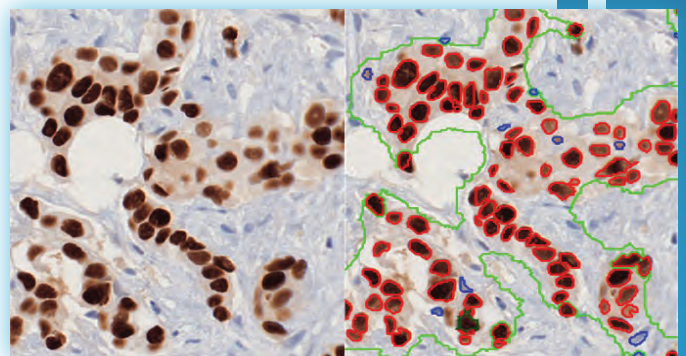
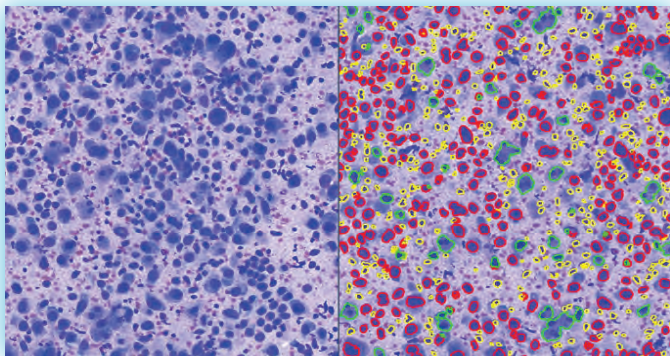


Custom AI Development

Custom AI Models Built for Your Needs

Get tailored, efficient solutions with our custom AI development services for short-term histopathology studies

- ✓ **Accelerated Delivery**
40% faster turnaround with lower development costs using ready-to-use AI models
- ✓ **100+ Pre-Built Models**
Leverage a vast library of pre-trained models for rapid customization
- ✓ **Smart Data Creation**
Generate training data rapidly with auto-annotation tools
- ✓ **Stain Adaptation**
Easily fine-tune the model for new stain variations
- ✓ **Automated Training**
Feature extraction using an in-house foundation model to accelerate model training



solutions@airamatrix.com



AIRA
M A T R I X

Artificial Intelligence
Transformed Analyses