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Skin lesion image analysis and documentation

Automates the analysis of skin lesion images using AI-powered diagnostic tools and seamlessly integrates findings into patient medical records. This workflow reduces analysis time by 60% while improving diagnostic accuracy and documentation consistency.

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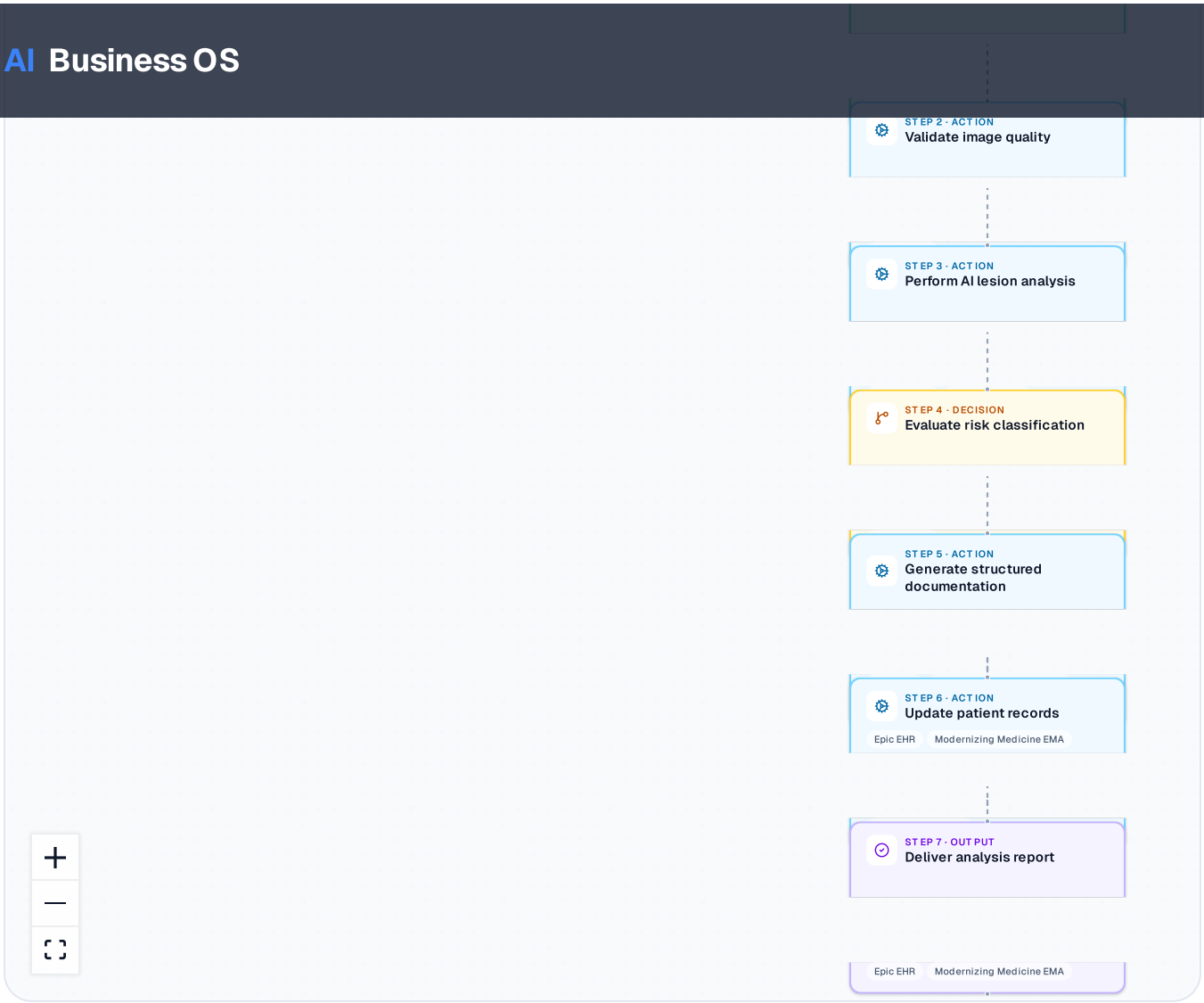
WORKFLOW TRIGGER

Patient skin lesion images are uploaded to the practice management system during clinical examination

Visual Flow

Each node represents an automated step. Connections show how data and decisions move through the workflow.



Step-by-Step Breakdown

Detailed explanation of each automated stage in the workflow.

1

TRIGGER

Receive lesion images

New skin lesion images are captured and uploaded from examination room devices or mobile applications. The system automatically detects new image files and initiates the analysis workflow.

DermEngine 3DermSystems

2

ACTION

Validate image quality

AI algorithms assess image quality including lighting, focus, and resolution to ensure images meet diagnostic standards. Poor quality images trigger re-capture notifications to clinical staff.

DermEngine

3

ACTION

Perform AI lesion analysis

Advanced machine learning models analyze lesion characteristics including asymmetry, border irregularity, color variation, and diameter. The system generates preliminary diagnostic suggestions and risk assessments.

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4

DECISION

Evaluate risk classification

System determines if lesion analysis indicates high-risk features requiring immediate physician review or routine follow-up based on established clinical protocols.

DermEngine

5

ACTION

Generate structured documentation

AI creates standardized clinical documentation including lesion measurements, morphology descriptions, and recommended follow-up actions. Documentation follows dermatology-specific templates and coding standards.

Epic EHR | Modernizing Medicine EMA | DermEngine

6

ACTION

Update patient records

Analyzed images, AI findings, and generated documentation are automatically integrated into the patient's electronic health record with appropriate medical coding and billing information.

Epic EHR | Modernizing Medicine EMA | Cerner PowerChart

7

OUTPUT

Deliver analysis report

Complete diagnostic report with images, AI analysis results, and clinical recommendations is made available to the dermatologist for final review and patient discussion.

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Outputs

- AI-analyzed lesion images with diagnostic annotations
- Structured clinical documentation in EHR
- Risk-stratified patient follow-up recommendations
- Automated billing codes and procedure documentation

Key Metrics

- Image analysis processing time
- Diagnostic accuracy compared to physician assessment
- Documentation completion rate
- High-risk lesion detection sensitivity

Tools & Integrations

- DermEngine
- 3DermSystems
- Epic EHR
- Modernizing Medicine EMA
- Cerner PowerChart

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