

# Transform Your Imaging Operations

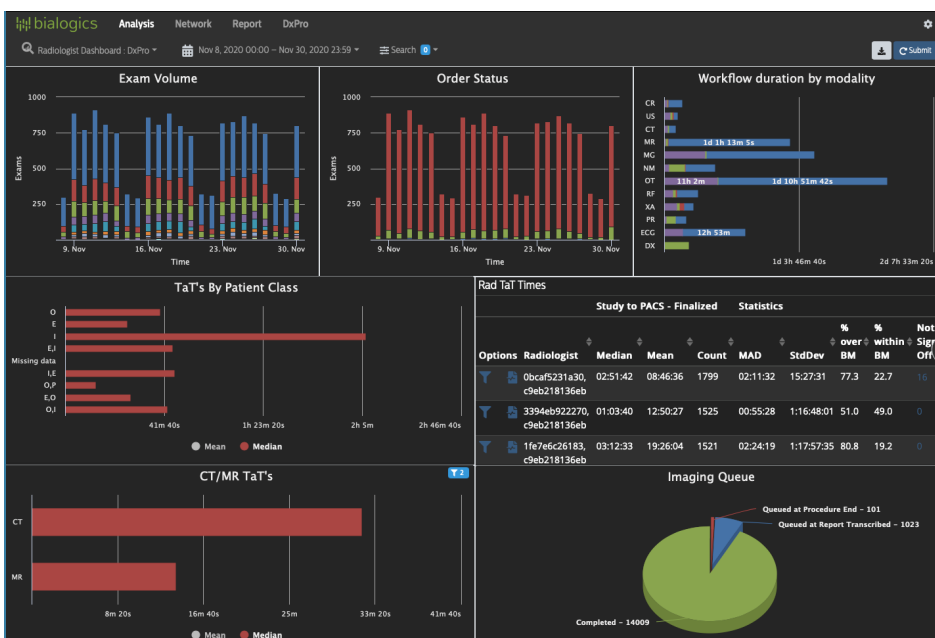
Biologics delivers deep insights into end-to-end imaging operations, enabling targeted optimization of workflow efficiency, quality, IT management, and associated costs enterprise-wide. Leveraging real-time intelligence derived through advanced NLP with Deep Learning applications, Biologics can transform your radiology practice by enabling evidence-based continuous improvement and providing a foundation for future AI and ML applications.

## Optimize Workflow & Reduce Cost

- Unify data points across Radiology, Cardiology, HIS/RIS, EHR, and other clinical information systems
- Execute evidence-driven continuous improvement that increases capacity and throughput, improves resource utilization, and reduces cost of care delivery
- Easily create custom dashboards and reports to measure and monitor workflow efficiency, resource utilization, turnaround times, operational costs, etc.

## Elevate Reporting & Care Quality

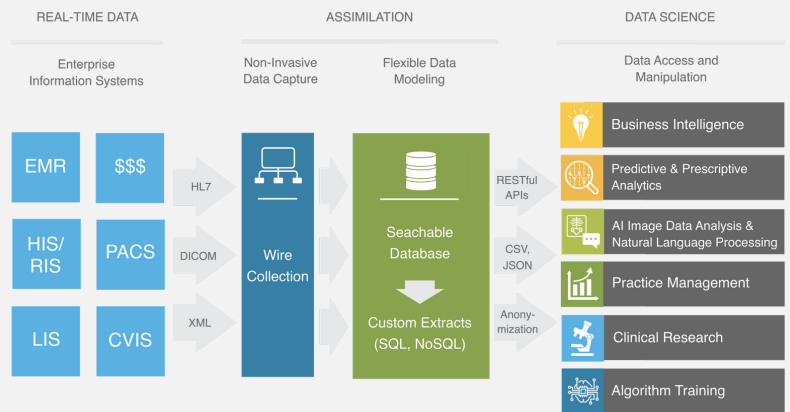
- Proactively monitor follow-up recommendations to ensure timely adherence
- Proactively monitor report quality and flag those that are incomplete, include ambiguous content, and/or contain peer review discrepancies
- Expand and automate quality-based reporting to access value-based reimbursements and incentives (P4P, MACRA, MIPS)



The DImax platform for Radiology delivers comprehensive insights into end-to-end workflow – from initial order to final results delivery using a combination of configurable dashboards and reports together with comprehensive data mining tools.

# Realize the Full Potential of your Medical Imaging Data

Biologics is the first fully interoperable, truly vendor agnostic platform for Medical Imaging analytics. Designed to be highly scalable, performant, and modular, Biologics provides advanced data management to support Artificial Intelligence (AI) and Machine Learning (ML) development, and federated learning across health systems and populations.



## A Revolutionary Research Engine

DxPro's advanced Natural Language Processing (NLP) engine creates structured data from the unstructured text of medical reports to simplify cohort identification and accelerate data collection and correlation for research across clinical systems, specialties, and populations.

- Automatically process all types of medical text with high precision and recall, aided by deep learning models that parse the often-confusing text of medical imaging reports
- Extract and codify medical terms using custom and standard ontologies (e.g. RadLex, SNOMED, MEDCIN, etc.)



The ability to intelligently search millions of unstructured reports in real-time enables our researchers to quickly identify clinical cohorts and decreases the time and cost of research initiatives.

- Summarize and sort diagnoses from clinical reports by dictionary, diagnosis, diagnostic category, report date, and report type or segment
- Uncover timely and actionable insights across patient populations at enterprise, community, state, or national levels.
- Search diagnostic reports for content to simplify cohort identification for patients with one or multiple comorbidities.
- Monitor physician ordering patterns and develop evidence-based appropriateness guidelines (e.g. Choosing Wisely)

The DxPro follow-up detector automatically identifies actionable recommendations from within diagnostic reports including pathologies, tests, and timeframes to improve adherence and reduce morbidity and medicolegal risk.

Date	Patient ID	Document Type	Sentence(s)	Reason	Procedure	Timeframe	Subsequent Exams	Category
Nov 8, 2020	b435694d441	CT HEAD WITHOUT CONTRAST (XR)	In light of the history of recurrent seizures, ideally recommend neurologic consultation to help guide further management which would include further imaging of the brain with MRI if not recently performed at an outside institution (no record of previous MRI at this institution).	seizures	consultation, management, imaging, MRI			
Nov 8, 2020	e632abb9220a	CHEST - 2 VIEWS	Recommend confirming with correlation with outside studies.		studies		3	
Nov 8, 2020	f4f34228ffed	CT NECK/CHEST WITH CONTRAST	Recommend ENT consultation.		consultation		1	
Nov 8, 2020	a991d2b25204	ANKLE RIGHT ROUTINE 3VWS	Depending on the level of clinical concern for possible underlying occult fracture, consider radiographic follow-up.	fracture	follow-up		1	
Nov 8, 2020	21720dc6fb2	TIB FIB RIGHT ROUTINE 2VWS	Radiographic follow-up recommended in the short-term.		follow-up	short-term		
Nov 8, 2020	5ecf28665263	US ABDOMEN AND PELVIS LIMITED	Consider appropriate specialist referral to help guide further management.		referral, management		2	
Nov 8, 2020	5527c9b048bb	HAND RIGHT ROUTINE 3 VWS	If clinically indicated consider short-term follow-up radiographs.		radiographs	short-term		
Nov 8, 2020	39245b93f578	CT HEAD WITHOUT CONTRAST	If there is clinical concern regarding possibility of a hyperacute or acute infarct then ideally recommend further imaging with MRI, or at minimum, follow-up CT over the next 48-72 hours.	acute infarct	imaging, MRI, CT		1	
Nov 8, 2020	bacc308e73f1	CT HEAD WITHOUT CONTRAST	If the patient's posterior fossa-type symptoms persist or progress, then consider further imaging with MRI.	symptoms	imaging, MRI		1	
Nov 8, 2020	e97359377bca	CT HEAD WITHOUT	In light of the clinical history, if there is clinical concern regarding	acute infarct	imaging, MRI,		1	



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