

Customer Case Study

Achieving over 99.8% Autovalidation Rate



Randers Regional Hospital standardizes result review and interpretation for immunoassay and clinical chemistry testing

Randers Regional Hospital



Region Midtjylland, Denmark



Lab Profile

Regional Hospital is one of five emergency hospitals in the Midtjylland region. It is the center for the region's health screening programs and manages approximately 30,000 emergency admissions annually.

- Hospital lab
- 34.000 test per day
- 5.200 tubes processed per day



Challenges

- Manual validation were causing delays in test result delivery
- Abnormal results were not reaching clinicians quickly enough
- Difficult to maintain current staff levels amid increasing workload



Risks

- Delayed results to clinicians could impact patient care and decision making
- Staffing strain could lead to burnout and reduced performance

"I can't remember the last time we observed delayed results due to late manual validation."



Joan Povlsen
Chief Biomedical Laboratory Scientist
Randers Regional Hospital

➤ **Simplify your workload with advanced informatics solutions**

Faster, Reliable Turnaround Times: 80% reduction in manual result validation improves TAT performance



Solution and Outcomes

The lab team **identified high-manual validation tests** as key pain points. They then embedded **intelligent rerun logic** and **automated validation** into the lab's IT systems, creating a streamlined workflow that reduced manual effort and improved consistency.

Example, common reasons for held results:

High and low P-Sodium and P-Potassium values often triggered manual review. After reruns, technologists had to manually compare both results to validate accuracy. To streamline this, the **workflow was embedded into the informatics system to automatically:**

- ✓ Check if results exceed lab-defined high/low cutoffs
- ✓ Detect if the result is a rerun
- ✓ Compare delta changes between original and rerun values
- ✓ Trigger rerun or reflex tests per lab protocols
- ✓ Apply lab-defined interpretive comments for consistent documentation

Streamlined workflow

- **Automated Rerun:** Automatically reruns and compares critical analyte results.
- **Built-in Decision Logic:** Automatically checks thresholds, identifies reruns, compares results, and triggers follow-up actions—minimizing manual review.
- **Simplified review:** Flagged results are surfaced upfront for faster, easier review.



Configuration: 2 Atellica Solution systems (2 Clinical Chemistry + 1 Immunoassay modules) + Atellica Diagnostics IT + Total Lab Automation

↓ **80%**

Reduction in number of results needing manual validation

99.8%

Autovalidation rate achieved for all chemistry and immunoassay tests

34 min

STAT TAT (test order to validated result); routine TAT incl. GP samples 90% percentile – 55 min.

2

Biomedical scientists manage full daytime lab operations

Success Factors

1

Instill confidence in quality and accuracy of results

2

Seamless IT Integration

3

Implementation of intelligent workflow design

The statements by Siemens Healthineers' customers described herein are based on results that were achieved in the customer's unique setting. Because there is no "typical" hospital or laboratory and many variables exist (e.g., hospital size, samples mix, case mix, level of IT and/or automation adoption) there can be no guarantee that other customers will achieve the same results.

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