

NRL Highlights 2024



المختبر المرجعي الوطني
National Reference Laboratory

Brought to you by M42

Vision

To set the global standards in laboratory diagnostic services that empower healthcare providers and enhance patient outcomes.

Mission

To deliver world-class laboratory services using cutting-edge technology and artificial intelligence, empowering our staff to improve patient care, support education, and advance medical research.

We create value for patients, partners, and employees while prioritizing sustainable practices for a healthier future.



Message From CEO

2024 has been a remarkable chapter in the story of NRL. We proudly launched our in-house Logistics Department, streamlining operations and ensuring timely service delivery. Expanded our footprint with the successful establishment and management of new NRL labs at ICLDC Al Dhafra and Sheikh Sultan Bin Zayed Hospital. We enhanced our efficiency with the successful completion of the Total Laboratory Automation Project at CCAD site. Introduced groundbreaking diagnostic tests in our ICAD Genomics department, providing cutting-edge laboratory diagnostics for our patients. These advancements and other accomplishments in this report highlight our dedication to innovation and our role as a trusted partner in healthcare. They are a testament to our efforts to bring health to the communities we serve and the collaborative spirit that drives our organization forward. While the successes are many, I am most proud of the resilience and unity displayed by our team throughout the year.

Looking forward to 2025 with anticipation.

With enthusiasm,

Dr. Laila Abdel-Wareth

NRL Highlights 2024

National Reference Laboratory (NRL) is at the forefront of Pathology and Laboratory Diagnostics in the United Arab Emirates (UAE), meeting the needs of a rapidly evolving healthcare landscape. Guided by a vision to empower healthcare providers for patient-centric excellence,

NRL continues to excel in providing comprehensive laboratory services. With a talented team of experts, state-of-the-art facilities, and an unwavering commitment to quality, NRL supports better health outcomes for diverse populations across the UAE and the region.

All figures unless otherwise noted are as of Dec. 31, 2024.



1.2
Million* **Patients Served**
in 2024

*Individual patients are counted once annually. Patient numbers are rounded.

Our Staff, Our Strength

Our staff are our most valuable asset.



300+

Staffs including specialized pathologists, scientists, and technologists



220+

Medical Laboratory Technologists



60+

Administrative and Support Staff



30+

Nationalities in a workforce that ensures diversity and Inclusion



20+

Pathologists & Scientists



7

Pathologists & Scientists added to the team in 2024

Dr. Adrian Glen Miller

Dr. Arun Kumar Jha

Dr. Imran Mirza

Dr. Muntadhar Al Moosawi

Dr. Neelam Wadhwa

Dr. Sara El Bisari

Dr. Yasin Ahmed

Technical Director, Advanced Chemistry

Consultant, Microbiology

Consultant, Anatomic and Clinical Pathology, Hematopathology, Molecular Genetic Pathology

Consultant, Transfusion Medicine

Specialist, Histopathology

Technical Director, Cytogenomics

Consultant, Anatomic and Clinical Pathology



Clinical Services

11.2 Million

Clinical Pathology Tests

Performed on samples from across the UAE and beyond

240

Solid Organ Transplants

From 174 deceased and 29 living donors made possible from nearly 3,000 crossmatches done by our HLA and Immunogenetics Laboratory.

160+

Additional Point of Care

Testing (POCT) devices connected to middleware for streamlined oversight and management to a total of 350.

55,000

Anatomic Pathology Reports

Generated on samples from the region

200+

Clients Served

Including hospitals, clinics, and corporations.

26

New Facilities Included

Under NRL POCT Department's centralized control

Quality & Safety

External Quality Assurance
Proficiency Testing

Turnaround
Time

99.5%

(EQA/PT) performance for all tests performed in our labs.

97.4%

Results meet the turnaround time for all tests performed in our labs.

NRL meets or exceeds the AHRQ 2022 benchmarks in most patient-related criteria on the Patient Safety Culture Survey across its lab network, with some opportunities for improvement in staffing and supervisory support at specific sites.

Accreditations

ISO 15189:2022 accredited by Emirates International Accreditation Center across the entire network of our labs in the UAE.

College of American Pathologists re-accreditation of NRL main laboratory at Industrial City of Abu Dhabi, Musaffah, Abu Dhabi.

Good Clinical Laboratory Practice Certification incorporating NRL laboratories at the Cleveland Clinic Abu Dhabi (CCAD), Al Maryah Island, Abu Dhabi, and the Main Lab at Industrial City of Abu Dhabi (ICAD), Musaffah, Abu Dhabi.



Operational Excellence and Innovation

NRL continues to lead with cutting-edge technologies and innovations



Automation

Implementation of the largest Total Laboratory Automation platform by Roche in the Middle East for faster and more accurate diagnoses.

Digital Pathology

Initiated digitization of histopathology workflows to enable remote consultations and AI-powered assessment for cancer cases

Next-Generation Sequencing (NGS)

Providing genetic insights for personalized medicine and cancer diagnostics.

35+ New Tests

Validated and introduced in our labs for quality and timely results.

Molecular Pathology & Genomics

- AML, 11 Genes, NGS, Varies
- APOE genotyping, Alzheimer disease, Blood
- B Lymphoblastic Leukemia/Lymphoma Diagnosis (BCR-ABL p190 quantitative), Blood
- B Lymphoblastic Leukemia/Lymphoma Diagnosis (BCR-ABL p190 quantitative), Bone marrow
- Cardiomyopathy, NGS, Blood
- Diabetes mellitus, monogenic, NGS, Blood
- Familial Hypercholesterolemia, NGS, Blood
- Maturity Onset Diabetes of the Young, MODY, NGS, Blood
- Myeloid Neoplasm, NGS, Varies
- Prenatal Diagnosis Whole Exome Sequencing, Duo, Amniotic Fluid
- Prenatal Diagnosis Whole Exome Sequencing, Proband only, Amniotic Fluid
- Prenatal Diagnosis Whole Exome Sequencing, Trio, Amniotic Fluid
- Retinitis Pigmentosa, NGS, Blood
- TP53 Full Gene Analysis, NGS, Varies
- Whole Exome Sequencing Data Reanalysis
- Whole Exome Sequencing, Duo, Blood
- Whole Exome Sequencing, Proband only, Blood
- Whole Exome Sequencing, Trio, Blood

Immunohistochemistry (IHC) Markers

- 20 new IHC markers validated: Amyloid Beta, ATRX, BCOR, C4D, CD44, CD207(Langerin), IDH1 R132H, INSM-1, NeuN, Neurofilament protein, NKX2.2, OCT2, OLIG2, PRMAE, SMAD4, SS18 S5X, SSTR2A, SV40, Tyrosine Hydroxylase,

Microbiology & Immunology

- Acid Fast (Mycobacteria) Organism ID by MALDI-TOF (MS)
- C. Trachomatis & N. Gonorrhoea Amplification Profile
- CMV DNA Quantitative PCR, Plasma
- Joint Infection (JI) PCR Panel
- STI-11 Test, PCR
- Treponema pallidum Hemagglutination (TPHA)
- U. Urealyticum & M. Hominis, PCR

Chemistry & Hematology

- 17-OH Progesterone
- Cystatin C, Plasma
- Fructosamine, Serum
- Insulin-like Growth Factor-binding Protein 3, Plasma
- Lupus Anticoagulant with Reflex to Hexagonal Phospholipids and DRVVT Confirm

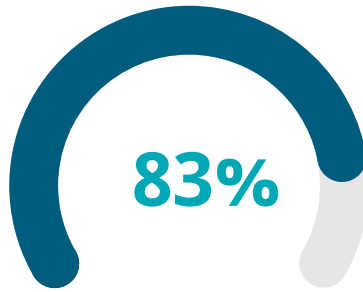
Fetal Medicine & Cytogenetics

- Chromosome Analysis (Karyotype and Aneuploidy testing by NGS)
- Non-Invasive Prenatal Screening (NGS) Basic with Fetal Sex
- Non-Invasive Prenatal Screening (NGS) Pro with Fetal Sex
- Non-Invasive Prenatal Screening (NGS) Pro without Fetal Sex
- Sperm DNA Fragmentation
- Y Chromosome Microdeletion Analysis (YCM)

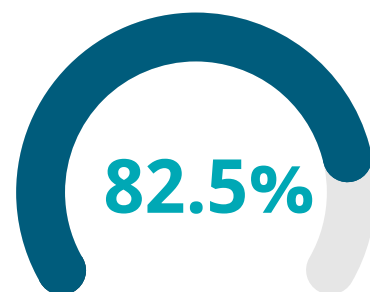
Customer Care & Satisfaction



Overall Quality of Service



Likelihood to Recommend



Overall Satisfaction with Service

NRL's performance aligns with leading international referral labs, reflecting its excellence in customer service and quality.

These results demonstrate our commitment to client trust, loyalty, and delivering superior diagnostic services

*Score of 4 and 5 on a scale from 1-5, where 1 is poor and 5 is excellent.



27 cars & 29 driver

Added to bolster in-house logistics for efficient transportation of patient samples to testing laboratories.



12,000+

Calls to NRL Customer Care



97%

First response rate within 4 hours for tickets/emails (benchmark 90%)



88%

Ticket/email resolution within 8 hours (benchmark 90%)



4 Seconds

Average speed of answer (benchmark 6 seconds)



Clinical Research

NRL prioritizes research to advance diagnostics

AED 4 Million

Collaborative clinical research grant from Department of Health, Abu Dhabi, UAE.

17

Peer-reviewed publications in leading journals

2

Ongoing clinical trials in oncology and endocrinology

Major Achievement

Good Clinical Laboratory Practice Certification incorporating NRL laboratories at the Cleveland Clinic Abu Dhabi (CCAD), Al Maryah Island, Abu Dhabi, and the Main Lab at Industrial City of Abu Dhabi (ICAD), Musaffah, Abu Dhabi.

Education and Training

Committed to lifelong learning and building the next generation of healthcare professionals



60+

Students trained in routine and advanced diagnostic techniques



5

UAE Nationals trained in routine and advanced diagnostic techniques



20

Continuing Medical Education (CME) events as Journal Club and Ground Rounds for staff learning and development.



65

Lab staff supported to attend national and international conferences to support them as lifelong learners.



NRL Engagement in Conferences

Arab Health Exhibition

Association for Diagnostics & Laboratory Medicine (ADLM), Middle East

International Federation of Clinical Chemistry World Lab 2024 Conference

International Surgical Pathology Symposium

MedLab Middle East

Point of Care Testing Conference



Community Engagement & Sustainability

NRL remains dedicated to giving back

Colon Cancer Screening Campaign for 700 Individuals

As a pilot program in collaboration with clinical partners.

33% Reduction in Energy Consumption

In our main laboratory compared to 2023 due to green measures implemented.

5 Blood Drives

Supported for blood and/or apheresis platelet collection in collaboration with Abu Dhabi Blood Bank (ADBB) and Cleveland Clinic Abu Dhabi.



Strategic Partnerships

NRL values collaborations to extend its reach and impact:

Assumed lab services at Sheikh Sultan bin Zayed Hospital (previously Zayed Military Hospital) - Sharjah



Established lab services at Imperial College London Diabetes Center Al Dhafrah, Abu Dhabi.



Government Initiatives Key contributor to UAE's national health strategy.



Looking Ahead NRL Aims To

Expand regional presence with new satellite labs.

Launch advanced diagnostic tests for neurological and oncological disorders.

Further integrate AI and big data analytics into laboratory operations.



Together, we transform diagnostics and enable better health outcomes for all.



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