

FINAL – MonEcho-Equivalent OB/GYN RIS & Ultrasound Reporting System

0. Scope & Authority

This document is the final and authoritative specification for an OB/GYN ultrasound RIS and reporting system. It must be implemented strictly as written. Any deviation requires formal validation. The target behavior is equivalent to MonEcho in workflow discipline and reporting logic.

1. Fundamental Rules (Non-Negotiable)

- One Visit = One Study = One Report.
- No manual patient re-entry on ultrasound devices.
- AccessionNumber is immutable and unique.
- Reports are structured and locked after validation.
- Secretary and physician responsibilities are strictly separated.

2. Complete Workflow

Secretary: Patient → Appointment → Visit (Order creation).

System: AccessionNumber generation → MWL publication.

Ultrasound (Samsung / GE): MWL query → exam → DICOM send.

Server: DICOM Storage → automatic study matching.

Physician: image review → structured report → validation → PDF generation.

3. DICOM Services (Mandatory)

- Modality Worklist (MWL) SCP.
- Storage SCP for images and cine loops.
- MPPS (optional but recommended) for exam status tracking.
- Required licenses: MWL SCU + Storage SCU on each ultrasound system.

4. Mandatory MWL & Matching Fields

| DICOM Tag | Purpose |
|--------------------------|----------------------------|
| PatientName | Patient identification |
| PatientID | Internal unique identifier |
| PatientBirthDate | Date of birth |
| PatientSex | Gender |
| AccessionNumber | Study matching key |
| RequestedProcedureID | Exam request identifier |
| ScheduledProcedureStepID | Visit identifier |
| StudyDescription | OB/GYN exam type |

5. Reporting Engine (Strictly Structured)

- Template-only reporting (free text limited to comments).
- OB templates: 1st trimester, morphology, growth, BPP.
- GYN templates: pelvic, TVUS, follicular monitoring.
- Automatic GA, EDD, percentiles.

- Mandatory fields enforced before validation.
- Languages: English & French.

6. Report Lifecycle Control

- Draft → Validated → Archived states.
- No modification after validation.
- Any correction requires a new version with audit trail.

7. PDF & Branding Rules

- Clinic logo and header mandatory.
- Physician identity and digital signature.
- Date/time and AccessionNumber visible.

8. Patient Report Delivery

- Paper printing supported.
- WhatsApp delivery via secure expiring link (OTP mandatory).

9. Security, Audit & Compliance

- Role-based access control (RBAC).
- Full audit log (create, edit, validate, export).
- HTTPS only, encrypted storage.
- No hard deletion of medical data.

10. Backup & Disaster Recovery

- Daily automated backups (database + DICOM files).
- Restore procedure must be documented and tested.

11. Acceptance & Go-Live Criteria

- MWL visible on Samsung and GE.
- Images correctly matched by AccessionNumber.
- Structured report validation enforced.
- Secure report delivery functional.