Sequence diagram

:Doctor	:Lung Cancer Prediction System	:Database

login(user,PW) → :Lung Cancer Prediction System

check(user) → :Database

Login:"Successfully" ←

Check:"OK" ←

Upload medical data(PatientID) →

Store Raw Data(PatientID) →

Store Raw Data:"Stored Successfully" ←

Cleaning Data

Returns Cleaned Data

Predicting lung cancer

Return lung cancer Prediction

Store Prediction Result(PatientID) →

Store Prediction Result:"Stored Successfully" ←

Send notification("Prediction is ready!") ←

Request Patient Diagnosis ()

Fetch Stored Prediction()

Request:Lung Cancer Prediction ←

Return Diagnosis ←

Request Diagnosis Report()

Generate Report

Send Report ←

Add Feedback To prediction Accuracy()

Saves feedback data

Uses stored feedback to fine-tune the model.

Feedback:"recorded successfully". ←

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  :Developer          :Lung Cancer Prediction System          :Database

        |◄───── Sends alerts about system errors() ────┐█│              |
        █│                                              █│              |
        █├──── Request System Performance Logs() ──────►█│              |
        █│              Retrieves logs and system status()─────────────►█
        █│◄──── Displays system health status() ──────┐█│ Sends logs and performance data() ◄───┤
        █│                                            ◄┘█│              █
        █├──────── Solve System Errors() ─────────────►█│              █
        █│                                              █┐ Saves updates█
        █│                                              █◄┘             █
        █│                          Save Updates() ─────█──────────────►█
        █├──── Uploads new training data or new model() ►█│             █
        █│                                              █┐ Triggers model retraining
        █│                                              █◄┘             |
        █│                                              █┐ Saves updates |
        █│                                              █◄┘             |
        █│◄──────── Training status() ────────────────┐█│              |
        █├──────── Updates security settings() ───────►█│              |
        █│                                              █┐ Applies security changes
        █│                                              █◄┘             |
        █│◄──────── Confirms security updates() ───────┐█│              |
        █├──────── Update Data integrity script() ────►█│              |
        █│                                              █┐ Saves updates |
        █│                                              █◄┘             |
        |                                               |               |
```