

# **User Release Notes**

for eRAD RIS  
Version 1.0  
Build 33

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## **1. Purpose**

This document describes some of the new features and changes implemented in eRAD RIS as of the end of Sprint 33. This version of eRAD RIS is referred to as Build 1.33.

Only features which can be visually demonstrated to the user will be outlined in this document.

## **2. Intended Audience**

This document is created by the RIS Development team for the RadNet RIS management team.

## **3. Installing/Accessing the Application**

The installation guide for the eRAD RIS client have been posted to the RadNet Wiki page at <http://mdbal01rdtweb/Wiki/>

Under the RIS menu, click on the rRIS page. The credentials to access the page are:

Username: rRIS

Password: Summerside

*Please note that Build 1.33 is considered a new core release of the application and will require a reinstallation of eRAD RIS. This is accomplished by navigating to the eRAD RIS shared installation drive and running the CoreInstall.bat file (ex: I:\RISDeployment\CoreInstall.bat)*

If you experience difficulties accessing the application, please do not hesitate to contact Darcy Noye with the PEI RIS Development Team.

## 4. New Features and Enhancements

### Interactive – Submit Button Changes

When opening a dictate screen as an interactive user the submit button will be modified to not show the bypass VR option as they really don't apply to this workflow. The normal submit option get rewired to send the interactive dictation directly to the transcriptionists for review.

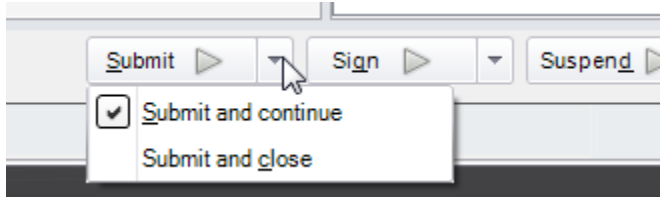


Figure 4.1 – Submit Button Options for Interactive Dictation User

### **Unknown Referring Fixes**

When a referring is unknown, the normal search button now launches the reconciliation screen. This prevents them from orphaning an unknown referring by the user selecting a different referring from the search without using the reconciliation screen.

On the user manager resource tab, the unknown referring checkbox is data bound ( as it was before) but is now visually disabled. This prevents someone from manually creating an unknown referring directly in this screen, without associating them to an order (which would make them an orphan). It also has the benefit of preventing someone from resolving an exception by unchecking the unknown checkbox, and selecting either no other resource type, or selecting them as a rad, tech, or transcriptioninists. This would create an order that is not truly linked to a referring.

When initially creating the unknown referring, the button has been renamed to Add Unknown (from Create New) to make it more intuitive.

When an order is Book-X 'ed (multiple orders are created) it is possible to re-use the same “unknown referring” on more than one order. However, the process for resolving unknown referring expects a relationship of 1 to 1 between order and unknown referring. Therefore, a message was generated after resolving each order saying:

“The unknown referring is referenced elsewhere and cannot be removed.”

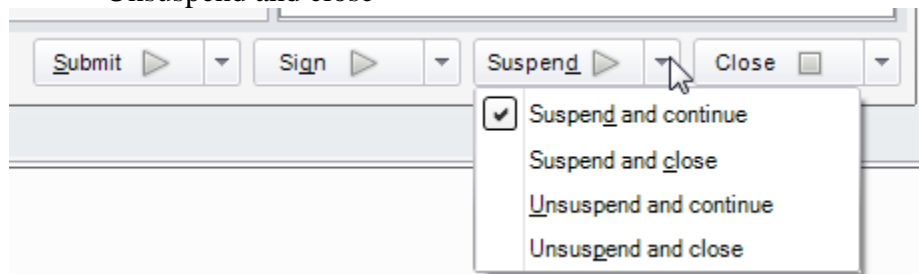
To avoid confusion this message was changed to:

"Your changes were saved, however the original unknown referring is still linked to another order."

## **Enhancements for Suspending / Un-suspending Studies**

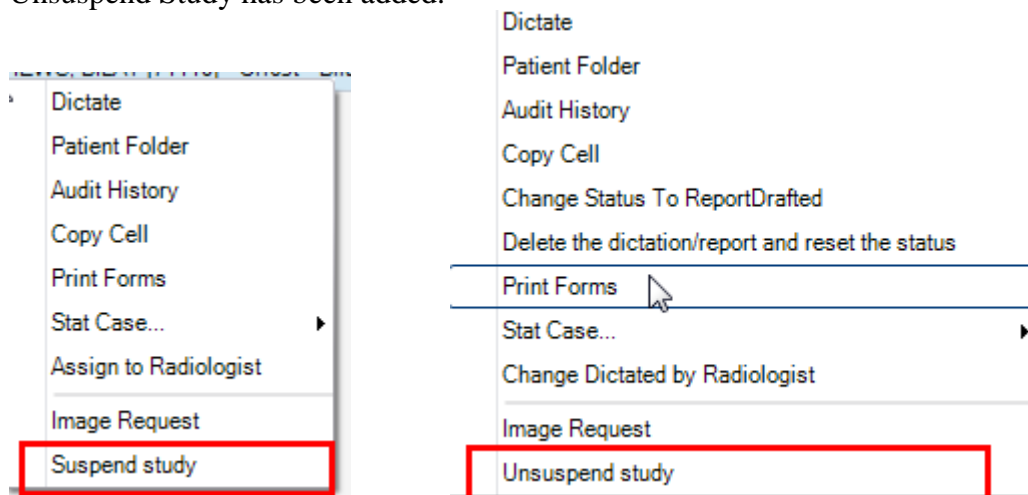
Additional ways to suspend and un-suspend studies has been added in build 33. In figure 4.1 is displaying the dictate window open on a study that is in suspended status. Two new options have been added to the Suspend button:

- Unsuspend and continue
- Unsuspend and close



**Figure 4.1 – Un-suspending options added to Suspend button drop list**

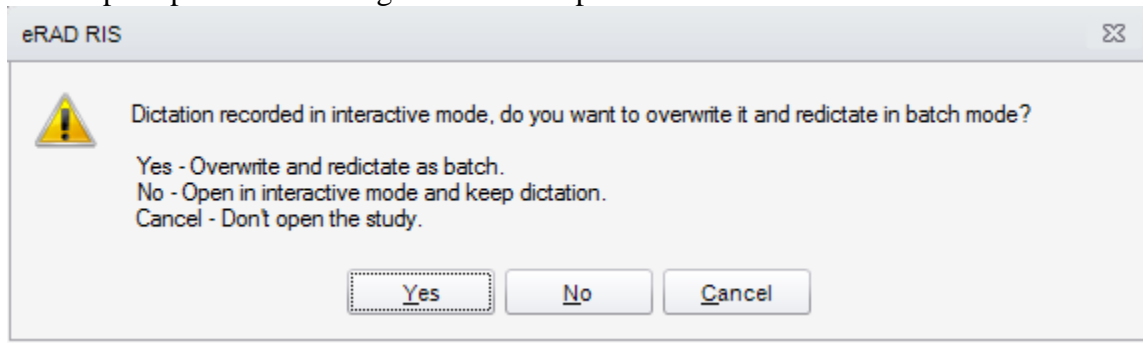
Also from the main work lists, context menu items have been added. When the study is in the Pending Dictation or Pending Signature work lists the context menu item option for Suspend Study has been added. For studies on the Suspended work list, the context menu item Unsuspend Study has been added.



**Figure 4.2 – Context menus displaying options to Suspend / Un-suspend studies from the work list**

## **Interpretation Type Handling**

In previous builds a non-Interactive (or desktop dictation) would encounter an error when opening a dictated study that was completed using Interactive dictation, and vice versa. In build 33 when a user opens a study that was dictated in a mode different than their current mode, they will be prompted with message box with 3 options.



**Figure 4.3 – New message box for non-interactive user opening interactive dictation.**

The message describes the action of each option.

**Yes** – Will open the dictate window with no dictation, and no text in report. If the dictate window is closed you will be prompted if you would like to save your changes. Selecting no will retain the original

**No** – Will open the dictate window in Interactive mode (even if the user's current preference is non-interactive) and keep the current dictation

**Cancel** – Will return the user to the work list.

## New Management Reports

### 1. Audit Log

#### Audit Log

Date: 1/24/2012  
User: IAN

| Date\Time ↕       | Patient ↕                  | User ↕           | Description ↕   | Changes ↕  |
|-------------------|----------------------------|------------------|-----------------|--|
| 1/24/2012 7:55 AM | (998877799): Eckerd, Sally | (lan).Power, Ian | Study Retrieved |  |
| 1/24/2012 8:04 AM | (998877799): Eckerd, Sally | (lan).Power, Ian | Study Updated   | <Changes><ModifiedRows><c_patient><last_medication_sync Before="18/01/2012 4:51:24 PM - 04:00" After="24/01/2012 8:01:29 AM - 04:00" /></c_patient></ModifiedRows><DeletedRows><c_patient_medication /></DeletedRows><AddedRows><c_patient_medication /></AddedRows></Changes>   |
| 1/24/2012 8:04 AM | (998877799): Eckerd, Sally | (lan).Power, Ian | Study Updated   | <Changes><AddedRows><c_patient_contact /></AddedRows></Changes>  |
| 1/24/2012 8:04 AM | (998877799): Eckerd, Sally | (lan).Power, Ian | Study Retrieved |  |
| 1/24/2012 8:07 AM | (998877799): Eckerd, Sally | (lan).Power, Ian | Study Updated   | <Changes><ModifiedRows><c_patient><last_medication_sync Before="24/01/2012 8:01:29 AM - 04:00" After="24/01/2012 8:04:43 AM - 04:00" /></c_patient><c_patient_medication><dea_class_code Before="" After="0" /></c_patient_medication><c_patient_lab_result><observation_date Before="05/02/2010 12:00:00 AM - 04:00" After="15/07/2009 12:00:00 AM - 03:00" /><requested_date Before="17/01/2012 12:00:00 AM - 04:00" After="15/07/2009 12:00:00 AM - 03:00" /></c_patient_lab_result></ModifiedRows><DeletedRows><c_patient_medication /></DeletedRows><AddedRows><c_patient_medication /></AddedRows></Changes> |

Figure 4.4 – Audit Log Report

### 1. Audit Log by Patient



## Audit Log by Patient

Patient: (11040) Senior, Bob

| Log Date ↕ | Log Time ↕ | User ID ↕ | Username ↕ | description ↕     | modification meta data ↕  |
|------------|------------|-----------|------------|-------------------|---|
| 01-25-2012 | 01:14 PM   | lan       | Ian Power  | Study Scheduled   | <Changes><AddedRows><c_patient /><c_patient_drug_allergy /><c_patient_problem_list /><c_patient_medication /><c_patient_lab_result /></AddedRows></Changes>   |
|            | 01:14 PM   | lan       | Ian Power  | Study Scheduled   | <Changes><AddedRows><c_visit /></AddedRows></Changes>   |
|            | 01:14 PM   | lan       | Ian Power  | Study Scheduled   | <Changes><AddedRows><c_order /></AddedRows></Changes>   |
|            | 01:14 PM   | lan       | Ian Power  | Study Scheduled   | <Changes><AddedRows><c_study /><c_study_item /><c_study_item_certification /><c_billing_detail /></AddedRows></Changes>   |
|            | 01:15 PM   | lan       | Ian Power  | Patient Retrieved |   |
|            | 01:15 PM   | lan       | Ian Power  | Study Retrieved   |   |
|            | 01:15 PM   | lan       | Ian Power  | Study Confirmed   | <Changes><ModifiedRows><c_study><confirmed_flag Before="N" After="Y" /></c_study></ModifiedRows></Changes>  |
|            | 01:15 PM   | lan       | Ian Power  | Study Retrieved   |   |
|            | 01:16 PM   | lan       | Ian Power  | Study Updated     | <Changes><ModifiedRows><c_patient><last_medication_sync Before="25/01/2012 1:13:59 PM -04:00" After="25/01/2012 1:15:59 PM -04:00" /></c_patient><c_patient_medication><dea_class_code Before="" After="0" /></c_patient_medication></ModifiedRows></Changes>   |
|            | 01:16 PM   | lan       | Ian Power  | Study Updated     | <Changes><ModifiedRows><c_visit><provided_clinical_summary_date Before="25/01/2012 12:00:00 AM" After="25/01/2012 1:16:02 PM" /><timely_access_date Before="25/01/2012 12:00:00 AM" After="25/01/2012 1:16:02 PM" /><transition_of_care_summary_flag Before="N" After="Y" /><transition_of_care_to_provider_flag Before="N" After="Y" /></c_visit></ModifiedRows><AddedRows><c_patient_contact /></AddedRows></Changes> |

Figure 4.5 – Audit Log by Patient

## Mammography Biopsy and Pathology

A tab was added to the Post Exam screen that displays current biopsies, allows for adding new biopsies, and provides edit/remove functionality.

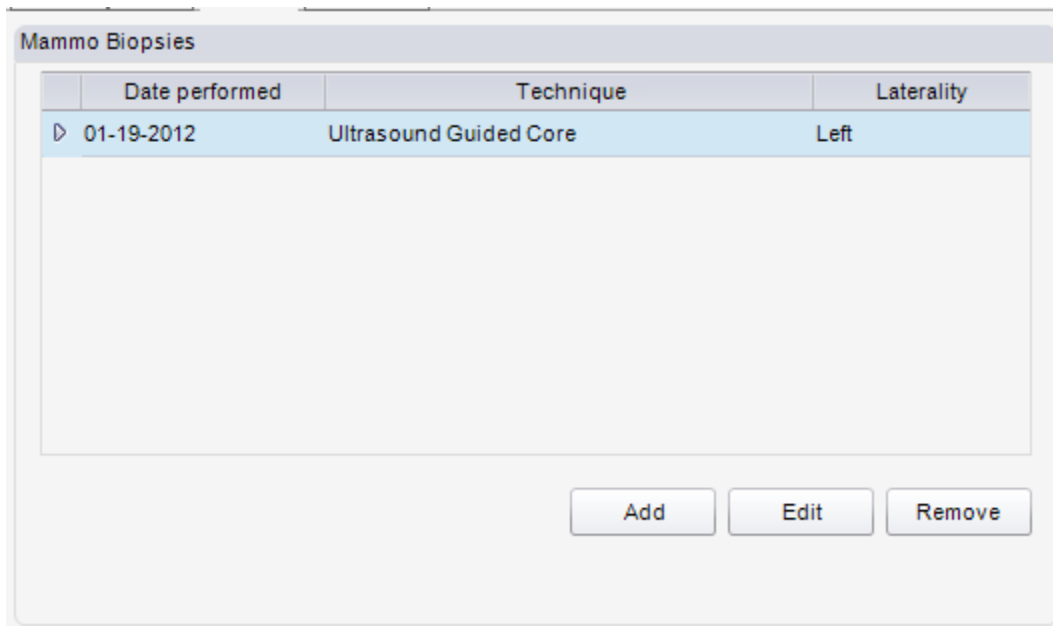


Figure 4.6 – Mammo Biopsy data pane from the Follow-up data window

- Clicking the Add or Edit button will present the Add/Edit Dialog, where biopsy information can be collected. On the next screen capture:
  - 1: Correlate biopsies with other studies
    - Clicking a checkbox will correlate the biopsy with the study corresponding to the checkbox row. After checking, the biopsy would appear if the checked row study was opened.
  - 2: Required fields
    - All fields on this side of the screen are required as of Sprint 29.
  - 3: Technical data
    - No fields on this side are required as of Sprint 29.
  - 4: Multi-type look ahead

- Pathology codes will automatically display if the first character of any word in the code is entered. For instance if the desired code is “The First Code”, it will appear if the character (T, F, or C) is entered.

The screenshot shows the 'Add Mammo Biopsy' form. At the top, there is a table with columns: Include, Flags, Status, Procedures, Referring, Accession #, Birad Code, Signed By Radiologist, MRN, and Patient. Two rows are visible, both for 'Signed1 MA Digital Mammo Screen Bil w Implants [G0202IMP] - Breast' by Heather813 Franco. Below the table, the form is divided into two main sections: 'General' and 'Technical'.

**General Section:**

- Performing Surgeon: [Dropdown]
- Biopsy Location: [Text]
- Biopsy Technique: [Dropdown]
- Date Performed: [mm-dd-yyyy] [Calendar icon]
- Lesion Classification: ☒ Benign ☐ Malignant
- Breast Side: ☒ Left ☐ Both ☐ Right
- Performed: ☒ Internal ☐ External
- Additional Surgery: ☒ Not Required ☐ Required
- Follow-up: ☐ Not required ☒ Required
- Follow-up Interval: [Dropdown]
- Create Followup [Button]

**Technical Section:**

- Nipple Involved: ☐ Yes ☐ No
- Tumor Size: [Text] mm
- Nodes Removed: [Text]
- Nodes Positive: [Text]
- Estrogen Receptor: ☐ (+) ☐ (-)
- Progesterone Receptor: ☐ (+) ☐ (-)
- Stage: [Dropdown]
- S Phase: [Text]
- Margin Status: ☐ Involved ☐ Uninvolved
- Pathology Codes: [Dropdown] (4. Edema x, b, Benign Cyst)
- Differentiation: ☐ Well differentiated ☐ Moderately differentiated ☐ Poorly differentiated
- Save [Button] Cancel [Button]

**Figure 4.7 – Add Mammo Biopsy**

- The performing surgeon can be selected /added from the referring physician popup.

**Add Mamm Biopsy**

| Include                             | Flags                    | Status  | Referring      | First Name | Last Name | Accession # | Biked Code | Technologist | Signed By | Referring | MDM | Performed | End Date |
|-------------------------------------|--------------------------|---------|----------------|------------|-----------|-------------|------------|--------------|-----------|-----------|-----|-----------|----------|
| <input type="checkbox"/>            | <input type="checkbox"/> | Signed1 | stephen stuart | Jul        |           |             |            |              |           |           |     |           |          |
| <input type="checkbox"/>            | <input type="checkbox"/> | Signed1 | stephen stuart | Jul        |           |             |            |              |           |           |     |           |          |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Signed1 | stephen stuart | Jul        |           |             |            |              |           |           |     |           |          |
| <input type="checkbox"/>            | <input type="checkbox"/> | Signed1 | stephen stuart | Jul        |           |             |            |              |           |           |     |           |          |

**Referring Search**

Search Criteria

First Name:  City:

Last Name:  Phone #:

NPI:

| Last Name      | First Name    | Summary  | Work Address  | Home Address   |
|----------------|---------------|--|---|--|
| <b>Doiron</b>  | <b>Denis</b>  | <b>User: denis</b><br>Gender: M<br>denis.doiron@radnet.com<br>Cell: (902) 439-3656<br>ID: 1050 | <b>Report Delivery: Fax Print</b><br>Testing<br>Kensington, PE C)Blm0   |  |
| <b>Yeo</b>     | <b>Dale</b>   | <b>User: dale</b><br>Gender: M<br>dale.yeo@radnet.com<br>Cell: (902) 555-5555<br>ID: 1051      | <b>Report Delivery: Fax</b><br>123 Pine Dr<br>LA, CA 90210<br>Fax: (999) 555-3121<br>Phone: (999) 555-1213              | <b>Report Delivery: Fax</b><br>222 Evergreen Terrace<br>LA, CA 90211<br>Fax: (999) 867-2121<br>Phone: (999) 868-5151 |
| <b>Aiken</b>   | <b>Darcy</b>  | <b>User: darcy</b><br>Gender: M<br>Cell:<br>ID: 1076<br>NPI: 768343                            | <b>Report Delivery: Fax</b><br>26 Rocky Oak Blvd.<br>84 South Green Milton Boulev<br>Lubbock, Ohio 72489<br>Fax: dfasdf |  |
| <b>Hampton</b> | <b>Dylan1</b> | <b>Gender: U</b><br>Cell:<br>ID: 281   | <b>Report Delivery: Fax</b>   |  |

Results exceed the 100 row limit

Differentiation:

☐ Well differentiated

☐ Moderately differentiated

☐ Poorly differentiated

Figure 4.8 – Performing Surgeon Search

- Follow-up orders can be created after “Create Followup” is clicked

The screenshot shows the 'Add Mammo Biopsy' window. At the top is a table with columns: Include, Flags, Status, Procedures, Referring, Accession #, Birad Code, Signed By Radiologist, MRN, and Pe. The table contains two rows of data. Below the table are two main sections: 'General' and 'Technical'. The 'General' section includes fields for Performing Surgeon, Biopsy Location, Biopsy Technique, Date Performed, Lesion Classification (Benign/Malignant), Breast Side (Left/Both), Performed (Internal/External), Additional Surgery (Not Required/Required), and Follow-up (Not required/Required). The 'Technical' section includes Nipple Involved (Yes/No), Margin Status (Involved/Uninvolved), Pathology Codes (Edema, Benign Cyst), and Differentiation (Well, Moderately, Poorly differentiated). A 'Create Followup' dialog box is open in the center, showing Site: Fisher, Interval: 4 months, and buttons for Schedule and Cancel.

| Include                             | Flags | Status  | Procedures   | Referring         | Accession # | Birad Code | Signed By Radiologist | MRN       | Pe |
|-------------------------------------|-------|---------|--|-------------------|-------------|------------|-----------------------|-----------|----|
| <input type="checkbox"/>            |       | Signed1 | MA Digital Mammo Diag Uni [G0206] - Breast                 | Heather813 Franco | 1067082     | 4          | Jeremy Noonan         | T.267 01- |    |
| <input checked="" type="checkbox"/> |       | Signed1 | MA Digital Mammo Screen Bil w Implants [G0202IMP] - Breast | Heather813 Franco | 1067155     | 4          | Jeremy Noonan         | T.267 01- |    |

**General**

Performing Surgeon:

Biopsy Location:

Biopsy Technique:

Date Performed:

Lesion Classification: ☒ Benign ☐ Malignant

Breast Side: ☒ Left ☐ Both

Performed: ☒ Internal ☐ External

Additional Surgery: ☒ Not Required ☐ Required

Follow-up: ☐ Not required ☒ Required

Follow-up Interval:

**Technical**

Nipple Involved: ☐ Yes ☐ No

mm

☐ (+) ☐ (-)

☐ (+) ☐ (-)

Margin Status: ☐ Involved ☐ Uninvolved

Pathology Codes:

Differentiation: ☐ Well differentiated ☐ Moderately differentiated ☐ Poorly differentiated

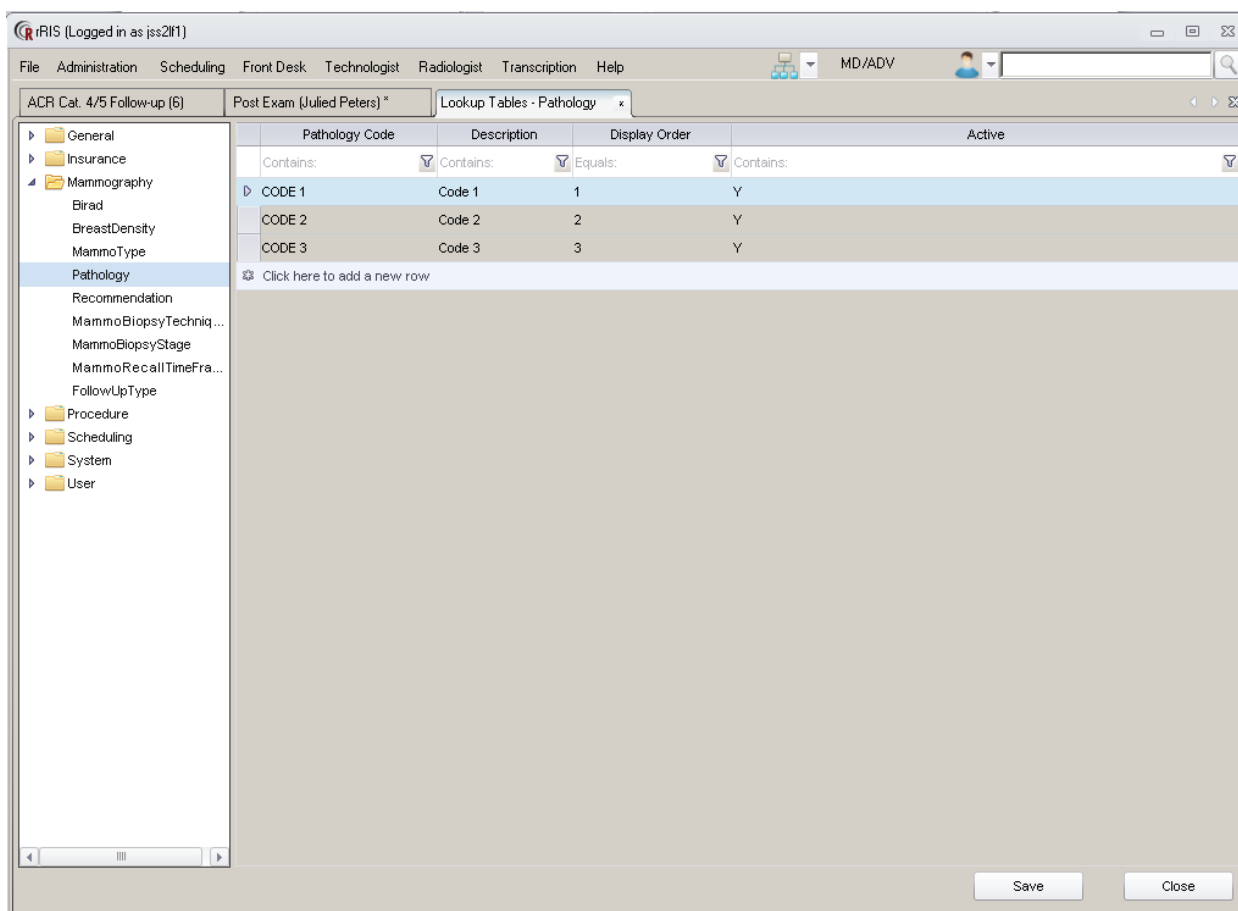
**Create Followup**

Site:

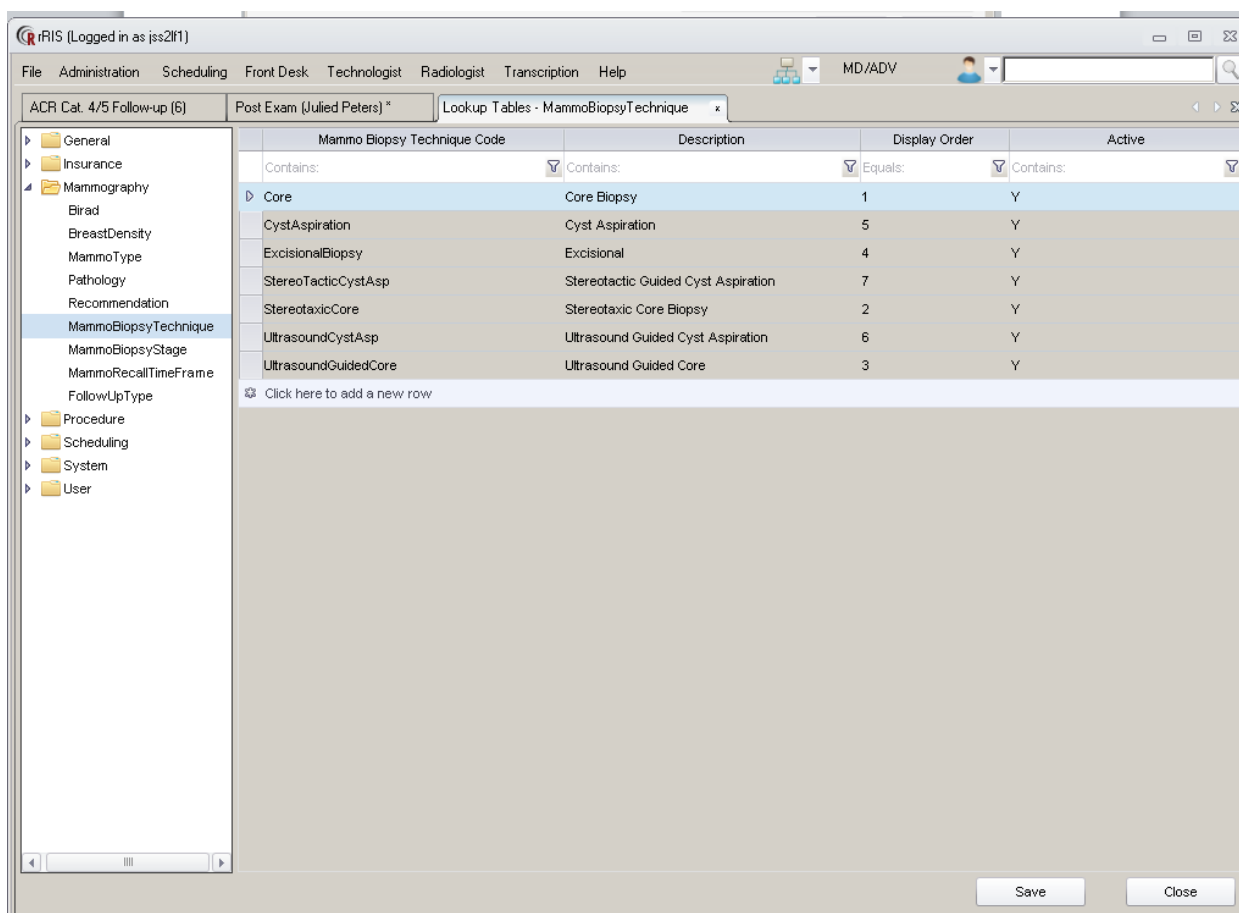
Interval:

**Figure 4.9 – Dialogue from Create Followup**

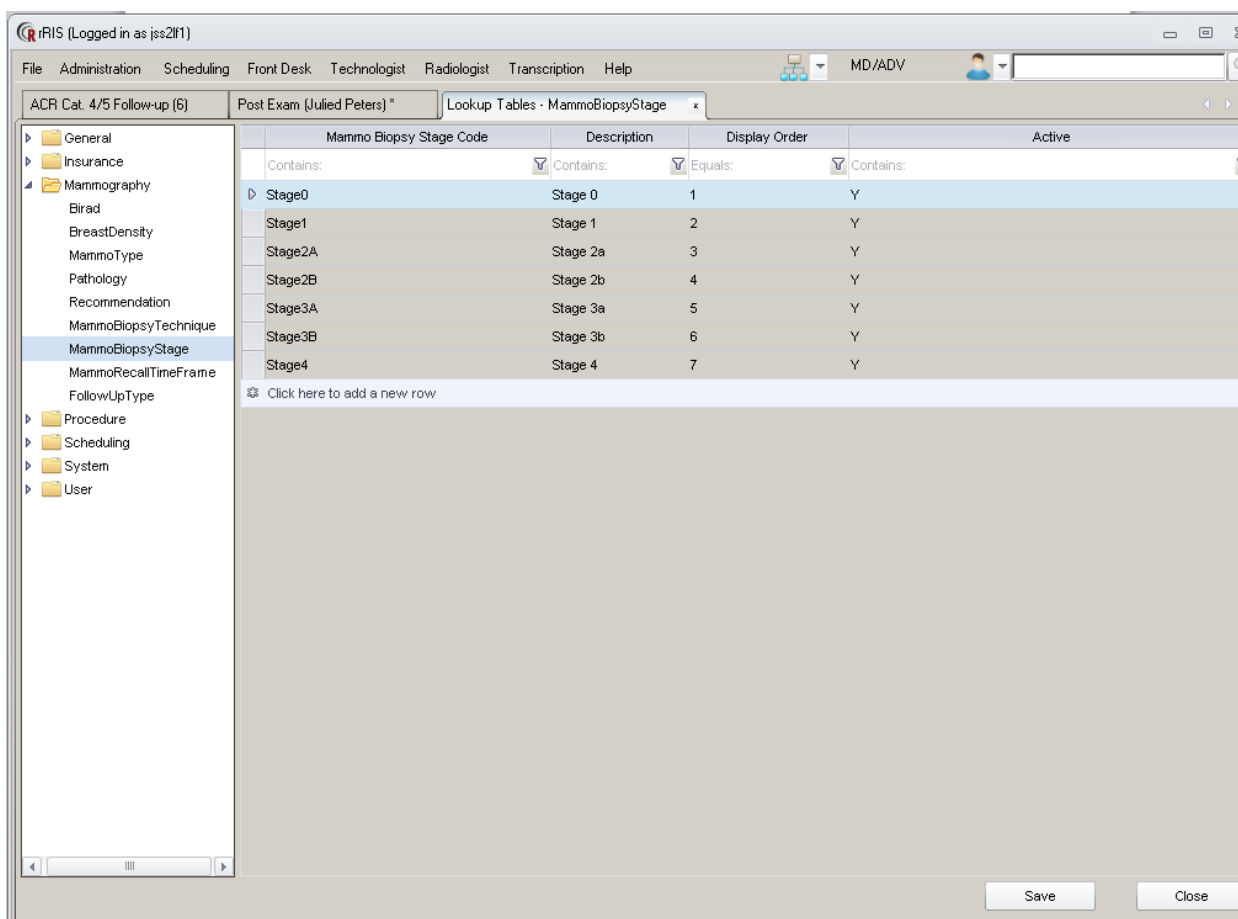
- Pathology, Biopsy techniques, and Biopsy stages can be added/edited from the lookup table editor:



**Figure 4.10 – Pathology lookup table**



**Figure 4.11 – Mammo Biopsy Technique Lookup Table**



**Figure 4.12 – Mammo Biopsy Stage Lookup table**



### **Scan Doc Events**

The transfer of scanned documents to the PACS was needed. The action queue mechanism already supported sending events to Mirth. New db\_action types were added for StudyCorrected, ScanDocAssociated, ScanDocDisassociated, ScanDocCreated, ScanDocUpdated, ScanDocDeleted. Actions of these types are sent to Mirth which writes out an xml file describing the action and containing the relevant keys.

From the PACS side a script was written to pull data from the RIS database and push it to the PACS. As described above we now notify the script that images / documents should be transferred.

### **Front end integration with PACS - MRN + Accession**

Previously we used the study instance UIDS to match with the PACS image. In build 33 we will now match on MRN as well as the Accession number as well as the 2 most relevant Priors.

## 5. Resolved Defects

Bugs, Suggested Features and Support Issues resolved in build 1.33. The extract is taken from Redmine bug tracking system and only displays defects resolved in 1.33.

| #   | Tracker | Priority | Subject   | Category         | Target version |
|-----|---------|----------|---|------------------|----------------|
| 888 | Bug     | Urgent   | Perform Exam - If you select include check box on second exam change reason code is required      | Thick Client GUI | 1.33           |
| 881 | Bug     | High     | Constraint exception on visit table when saving a multiple study containers                       | Web Services/DB  | 1.32           |
| 872 | Bug     | High     | Concurrency error on saving macro lookup.   | Admin Tools      | 1.32           |
| 866 | Bug     | High     | Error thrown when changing Performed Procedure Code during perform exam                           | Thick Client GUI | 1.32           |
| 856 | Bug     | High     | Mammo exams > Recommendation and Tissue Density are not saving                                    | Thick Client GUI | 1.31           |
| 742 | Bug     | High     | Beaumont - Issue with WSBinding   | Web Services/DB  | 1.25           |
| 898 | Bug     | Normal   | Suspending a transcribed study from work list context menu will not prompt with Suspended message | Thick Client GUI | 1.33           |
| 878 | Bug     | Normal   | All hyperlinks in dictate / reporting summary data pane open as "Referring Details"               | Thick Client GUI | 1.32           |
| 873 | Bug     | Normal   | User can create another new macro from the create new macro editor                                | Admin Tools      | 1.32           |
| 871 | Bug     | Normal   | Create a new macro from Macro Editor returns a Unique key violation                               | Admin Tools      | 1.32           |
| 863 | Bug     | Normal   | Error on AssignedRad when attempting to edit image request from perform exam.                     | Thick Client GUI | 1.31           |
| 862 | Bug     | Normal   | Attempting to Add image request can throw an error  | Thick Client GUI | 1.31           |
| 855 | Bug     | Normal   | Follow up work lists still have Post Exam in context menu   | Thick Client GUI | 1.31           |
| 832 | Bug     | Normal   | Demographics at encounter is duplicated   | Thick Client GUI | 1.32           |

## **RADNET, Inc. – eRAD RIS Pre-Release Notes**

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|     |     |        |   |                  |      |
|-----|-----|--------|---|------------------|------|
| 768 | Bug | Normal | CQM window > Report Interval fields need to be longer | Thick Client GUI | 1.33 |
| 724 | Bug | Normal | Patient Tab > View Clinical Document wrong tab stop   | Thick Client GUI | 1.33 |
| 679 | Bug | Normal | Drug Allergy data panel                               | Thick Client GUI | 1.33 |

## 6. Known Limitations

The following are Bugs, Suggested Features, and Support Issues found in build 1.33. This build is the current QE build and testing is ongoing. The list may increase in size. This document will not be updated or re-released.

| #   | Status   | Subject   | Category         | Target version | Resolved Version |
|-----|----------|---|------------------|----------------|------------------|
| 895 | New      | Signing Interactive job as non interactive user can delete report   | Thick Client GUI | 1.33           |                  |
| 886 | Resolved | Removing Pathology codes throws error   | Thick Client GUI | 1.33           | 1.34             |
| 883 | Resolved | Saving Biopsy result can throw error  | Thick Client GUI | 1.33           | 1.34             |
| 900 | New      | Add multiple to UserGroupPermission throws exception  | Admin Tools      | 1.33           |                  |
| 899 | Resolved | Study suspended without interpretation throws error after suspended message   | Thick Client GUI | 1.33           | 1.34             |
| 896 | Resolved | Issues with Changing "Internal RIS" passwords.  | Admin Tools      | 1.33           | 1.34             |
| 894 | Resolved | Multi order scheduling search results not picking correct times   | Thick Client GUI | 1.33           | 1.34             |
| 893 | New      | Macro editing - same user can be added twice  | Admin Tools      | 1.33           |                  |
| 892 | New      | Dictate > if duplicate MRN's exist but from different issuer of ID the Summary and Exam Information can display different patient names | Web Services/DB  | 1.33           |                  |
| 891 | New      | multiple study scheduling search results not correct for first site on list   | Web Services/DB  | 1.33           | 1.34             |
| 890 | Resolved | On a new order removing procedure with laterality code throws error   | Thick Client GUI | 1.33           | 1.34             |

## **RADNET, Inc. – eRAD RIS Pre-Release Notes**

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|     |          |   |                  |      |      |
|-----|----------|---|------------------|------|------|
| 887 | New      | Cannot submit dictation db constraint   | Web Services/DB  | 1.33 |      |
| 885 | New      | Mammo Follow-up > Add \ Edit biopsy tabbing order   | Thick Client GUI | 1.33 |      |
| 884 | Resolved | When region and language format is not English (United States) then "Meaningful Use" on administration screen does not work | Thick Client GUI | 1.33 | 1.34 |
| 882 | New      | Adding Performing Surgeon from search throws error  | Thick Client GUI | 1.33 |      |
| 897 | Resolved | Placement of tabs on Book X   | Thick Client GUI | 1.33 | 1.34 |