PenRad

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Bone Density Report Generation Module

The Bone Density Reporting Module is available for the PenRad Mammography Information System and allows facilities to generate, with simple taps to the screen complete narrative reports in mailable/faxable formats and complementary patients letters.

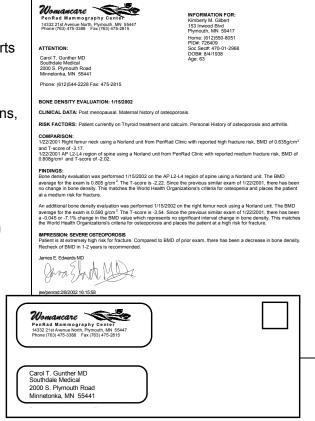
Two primary screens, first screen (main), accommodates the selection of patient risk factors and clinical data, recommendations, overall change and impression, recall interval and selection of optional patient letter. This screen also facilitates selection and review of individual current and prior scan information.

Second primary screen captures scan information such as BMD, T&Z scores, machine type and body region scanned. Automatic calculation of BMD risk level, value and percentage change from prior scans is performed.

Additional support screens display prior narrative reports and selection of prior scans for comparison.

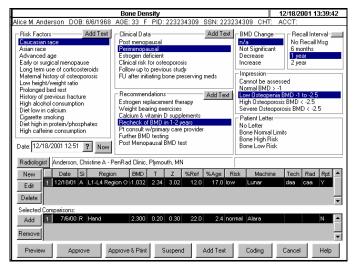
Typical Operation:

Technologist selects patient via the patient list or HIS/RIS work list. Then selects exam type as bone density, specifies exam date and the patient study is directly sent to input scan data or added to the reading schedule for deferred scan data input.



When a study is selected, the Main Bone Density screen appears allowing the capture of data for new scan and comparisons scans, along with the selection of risk factors and clinical data by the technologist. As various data is collected during the study, the exam can be suspended multiple times to facilitate various facility workflow patterns.

When the radiologist selects a suspended study to approve, then the final recommendations, overall change and impression, recall interval and patient BMD letter (if applicable) are selected. For items not featured in each of the selection windows, user can tap the add text button and select or add new items for future use.

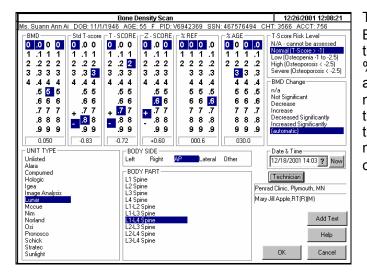


Each scanned region associated with the current study is displayed in the upper spreadsheet along with a summary of items specified for quick reference. A new scan study is added by tapping the new button and items associated with scanned region are selected. Current scans are stored for future comparisons.

Lower spreadsheet displays a quick reference of specified comparisons scans for current study. To specify or add comparison scans, user taps the add button and select scans from list, or, adds new prior scan data if necessary.

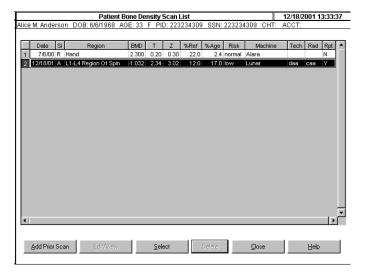
Typical Operation Continued:

The Bone Density Scan screen (below) facilitates data capture for an individual scan for new/current or prior scans. Values are referenced in the report for BMD, T, Z and standardize T-Score, % bone density young and age reference are entered by tapping on individual column to create the full score value. Extended decimal places are optional, as well as input for each score type. Exam scan date, imager/location, scan unit type, body side and region are also entered by a simple tap and are referenced in the narrative report.



The Bone Scanned List screen (right) lists a summary of previous recorded BMD scans, allows selection of BMD exams for comparison for a new study, and facilities access to add/delete/view previous BMD scans. Access is granted from the add comparison button on Bone Density Main screen or from the Patient Maintenance/Prior Exams screen via the bone density button.

The BMD risk is automatically computed from the T-Score. BMD change is automatically calculated and inserts into the narrative report reflecting the differences of value and % change from the most current comparison scan, from alike scan region and machine type from the available non-zero score. The numerical values are calculated from the BMD score first, if not, then the STD T-Score, if not, then the T-Score. If same region is scanned and dissimilar machines, then the universal STD T-Score is used. BMD change and risk can be manually overridden.



The Bone Density Module is a value added sample of the PenRad commitment to provide our users with the most comprehensive Mammography Information System available.

Other value added PenRad modules include QA/QC module for processors and imaging machines, integrated appointment and schedule module, HIPPA compliance and custom bi-directional HL7 interfaces. PenRad continues to provide "more" than just a mammography reporting and tracking system. The best is even better.

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