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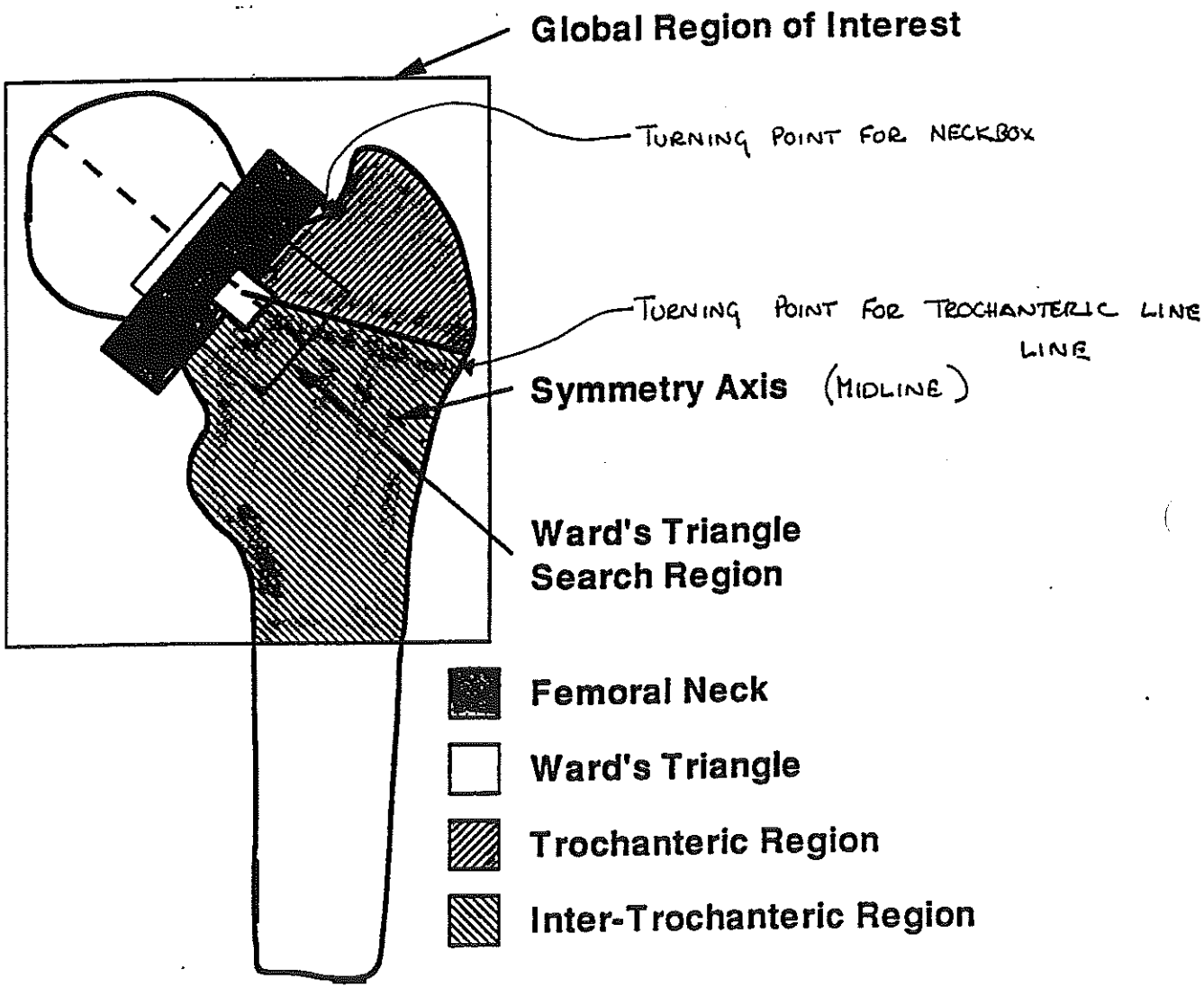
STUDY OF OSTEOPOROTIC FRACTURES

DXA ATLAS

VISIT 4


Global Region of Interest
TURNING POINT FOR NECKBOX
TURNING POINT FOR TROCHANTERIC LINE
LINE
Symmetry Axis (MIDLINE)
Ward's Triangle
Search Region
Femoral Neck
Ward's Triangle
Trochanteric Region
Inter-Trochanteric Region

SUMMARY OF HIP REGION PLACEMENT - BASELINE

GLOBAL ROI (default size)

TOP - up to 10 pixels outside edge of acetabulum
INNER - up to 10 pixels outside edge of acetabulum
BOTTOM - approximately 10-15 pixels below bottom of lesser trochanter
OUTER - 6 pixels outside edge of greater trochanter

BONE EDGES

the global ROI is enlarged to allow bone edges to fill automatically

only the top and inner sides of the global ROI are expanded (10 pixels at a time) to get the bone edges to fill in

if edges fail to be outlined completely after expanding the ROI as much as possible, the default size is returned to and the edges are filled in manually

MIDLINE

never alter manually
runs parallel to sides of neck
divides the head of femur equally
dashed lines do not extend beyond outer bone edge

NECKBOX

default neckbox size is either 51x16 or 53x16 (depends on software)
upper corner near trochanter just touches the turning point on trochanter
remaining 3 corners are in soft tissue
lower portion does not overlap the lesser trochanter or ischial bone
area is minimum of 2.5 cm (8-10 pixels wide)

WARDS TRIANGLE

never manually adjust
11x11 pixel square
touching or only 2-3 pixels from neckbox
never touching dotted lines of neck
never located on the greater trochanter

TROCHANTERIC LINE

tip is at outer turning point of greater trochanter
located within about 5 pixels either side of the midline, if no turning point
line does not extend beyond outer bone edge

SUMMARY OF HIP REGION PLACEMENT - COMPARE

GLOBAL ROI

same size as the baseline
most important to match dotted region around neck

BONE EDGES

similar to baseline edges

MIDLINE

never alter manually
runs parallel to sides of neck
divides the head of femur equally
dashed lines do not extend beyond outer bone edge

NECKBOX

same width as baseline
same location as baseline

WARDS TRIANGLE

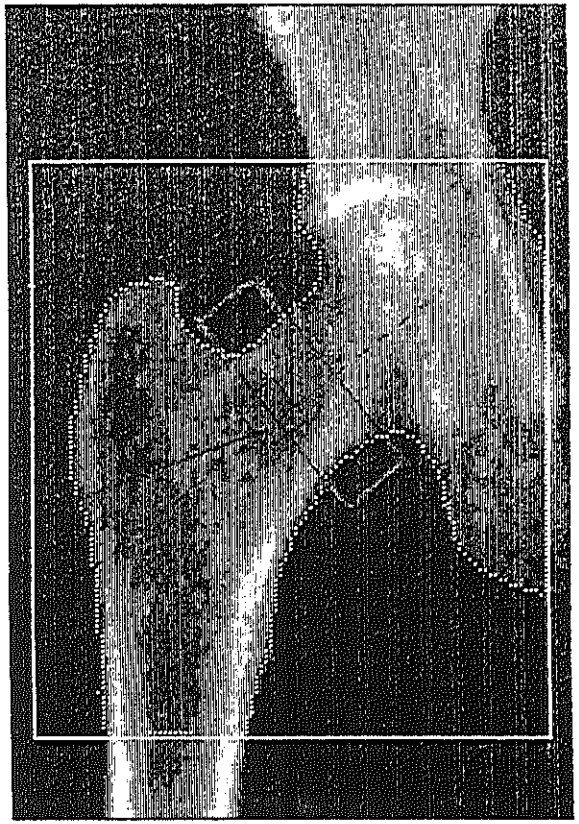
never manually adjust
11x11 pixel square
touching or only 2-3 pixels from neckbox
never touching dotted lines of neck
never located on the greater trochanter

TROCHANTERIC LINE

tip is at outer turning point of greater trochanter
located within about 5 pixels either side of the midline, if no turning point
line does not extend beyond outer bone edge

S.O.F. MINNEAPOLIS

k = 1.245 d0 = 121.3(1.000H)



·Aug 24 08:05 1992 [102 x 114]
Hologic QDR 1000 (S/N 203)
Right Hip V4.47.1

W08249204 Mon Aug 24 07:53 1992
Name: dickey, anna m.
Comment:
I.D.: 20309 Sex: F
S.S.#: - - Ethnic: W
ZIP Code: Height: 5' 4"
Scan Code: 210 Weight: 117
BirthDate: 11/07/18 Age: 73
Physician:

C.F.	1.005	1.038	1.000
Region	Area (cm^2)	BMC (grams)	BMD (gms/cm^2)
Neck	4.44	2.73	0.615
Troch	10.11	4.58	0.453
Inter	19.61	13.57	0.692
TOTAL	34.15	20.88	0.611
Ward's	1.10	0.40	0.360

Midline (92,120)-(24, 66)
Neck 63 x 16 at [-31, 18]
Troch -14 x 39 at [0, 0]
Ward's 11 x 11 at [-7, 8]

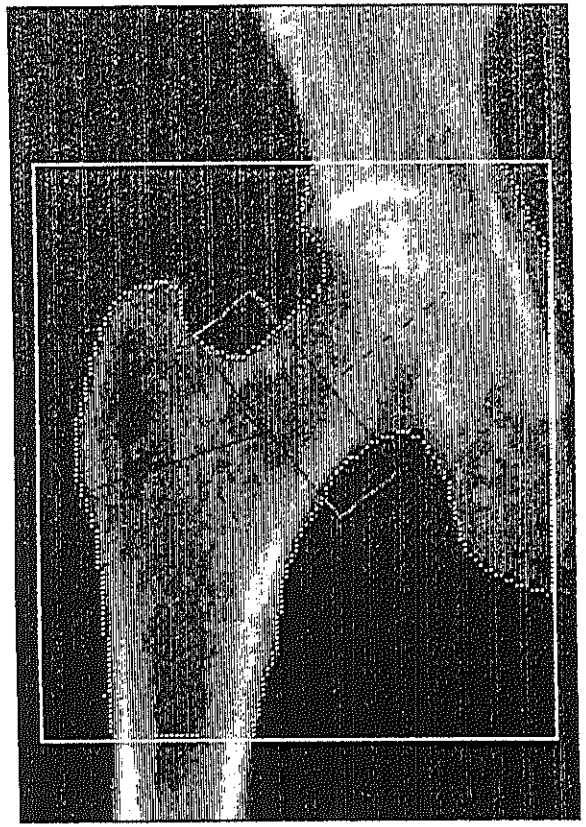
HOLOGIC

BEFORE REANALYSIS

- NECK BOX TOO HIGH UP NECK

S.O.F. MINNEAPOLIS

k = 1.245 d0 = 121.3(1.000H)



·Oct 6 14:34 1992 [102 x 114]
Hologic QDR 1000 (S/N 203)
Right Hip V4.42

W08249204 Mon Aug 24 07:53 1992
Name: dickey, anna m.
Comment:
I.D.: 20309 Sex: F
S.S.#: - - Ethnic: W
ZIP Code: Height: 5' 4"
Scan Code: 210 Weight: 117
BirthDate: 11/07/18 Age: 73
Physician:

C.F.	1.005	1.038	1.000

Region	Area (cm^2)	BMC (grams)	BMD (gms/cm^2)
Neck	4.71	2.78	0.590
Troch	9.49	4.31	0.455
Inter	19.10	13.24	0.693
TOTAL	33.30	20.33	0.611
Ward's	1.11	0.39	0.353

Midline (92,120)-(24, 66)
Neck 51 x 16 at [-25, 15]
Troch -15 x 37 at [0, 0]
Ward's 11 x 11 at [-7, 9]

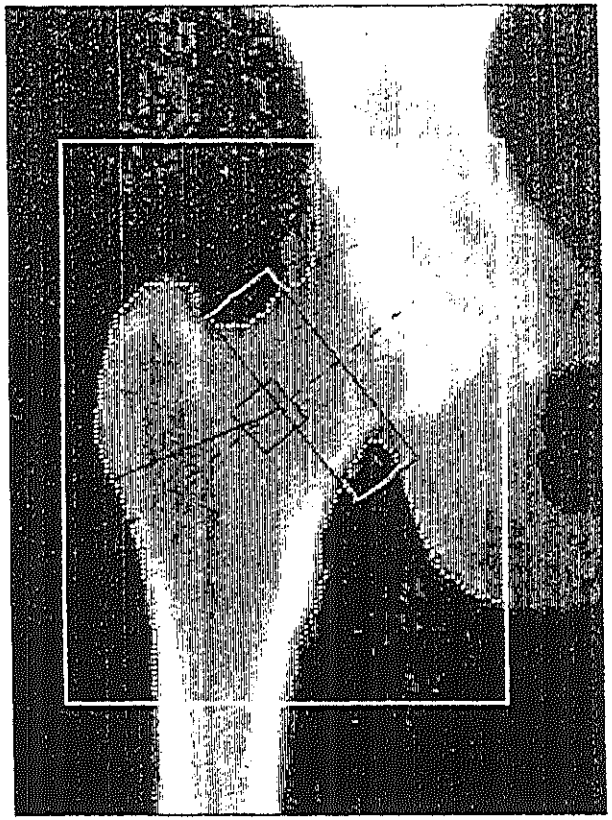
HOLOGIC

AFTER REANALYSIS

- NECK BOX TOUCHES TURNING POINT ON TROCHANTER

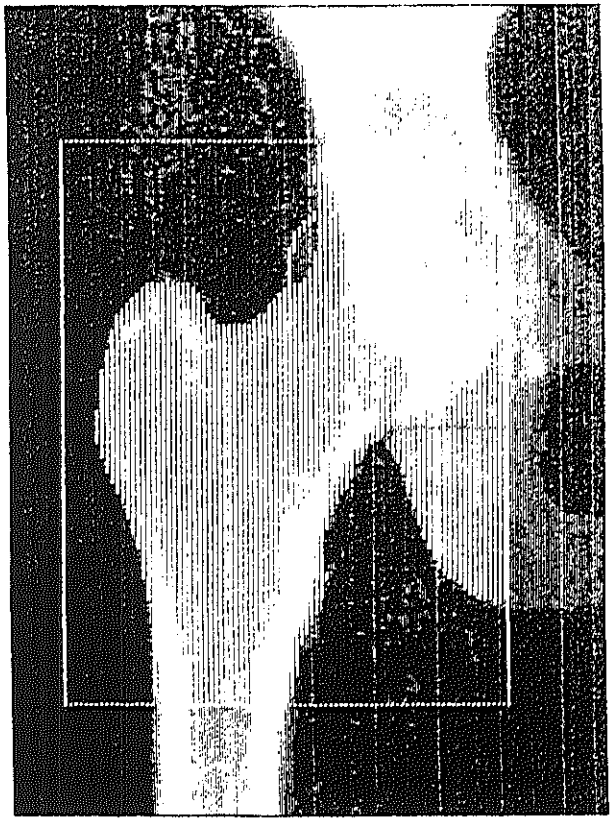
OUTLINING NECK NOTCH & DELE NG ISCHIUM OF HIP SCAN

k = 1.239 d0 = 122.7(1.000H)



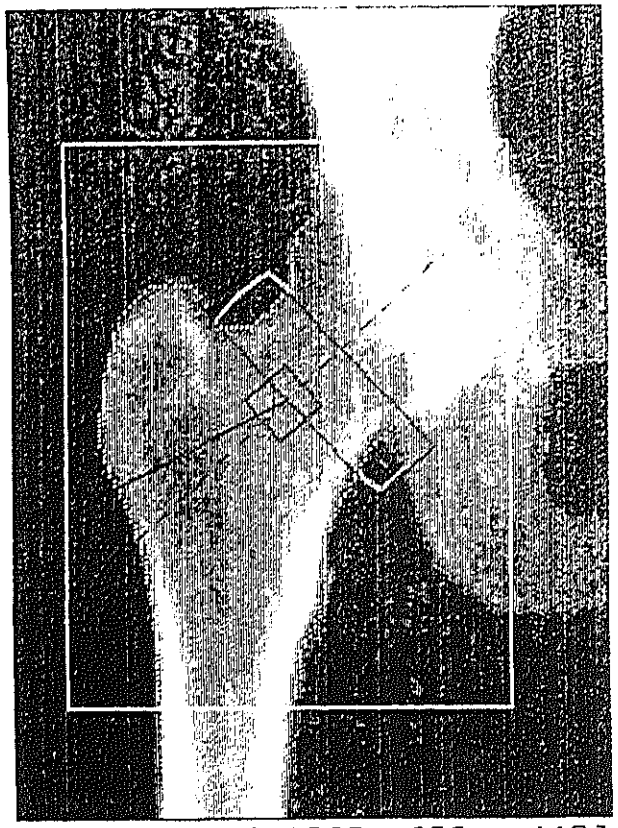
·Oct 6 13:21 1992 [88 x 112]
Hologic QDR 1000 (S/N 203)
Right Hip V4.42

BEFORE



NOTCH OUTLINING
&
ISCHIUM DELETION

k = 1.239 d0 = 122.7(1.000H)



·Oct 6 13:38 1992 [88 x 112]
Hologic QDR 1000 (S/N 203)
Right Hip V4.42

AFTER

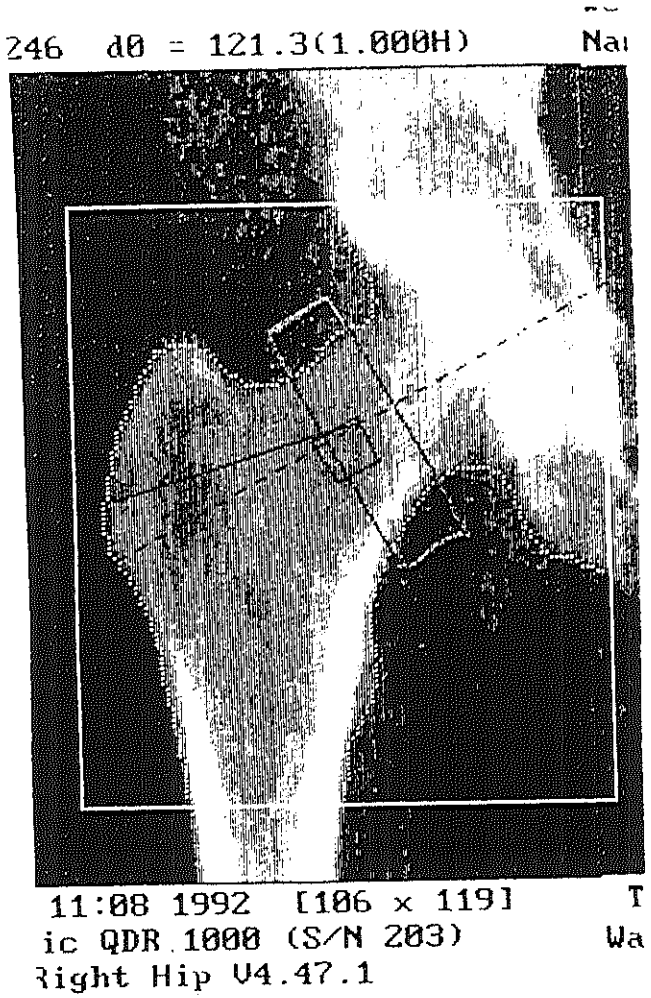
NECK BMD = 0.623

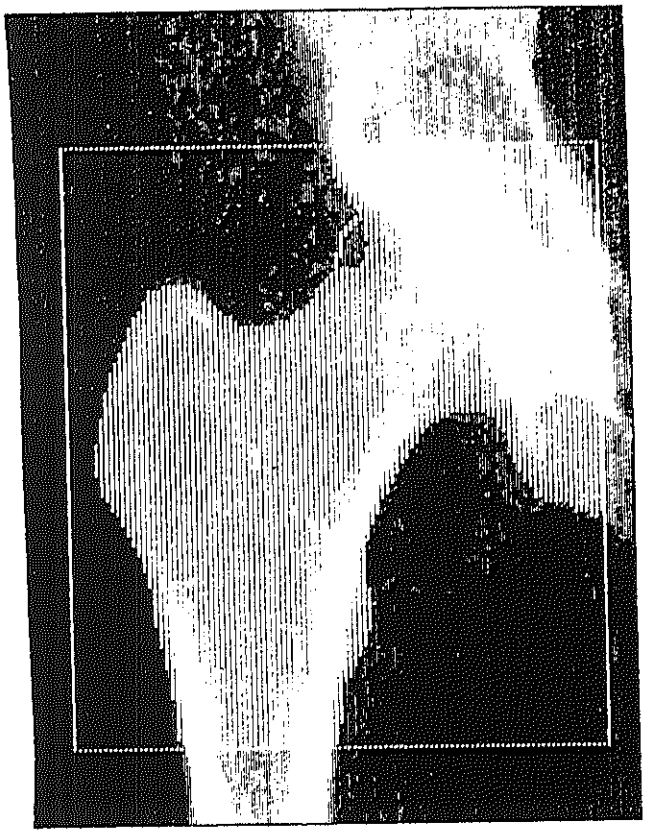
NECK BMD = 0.646

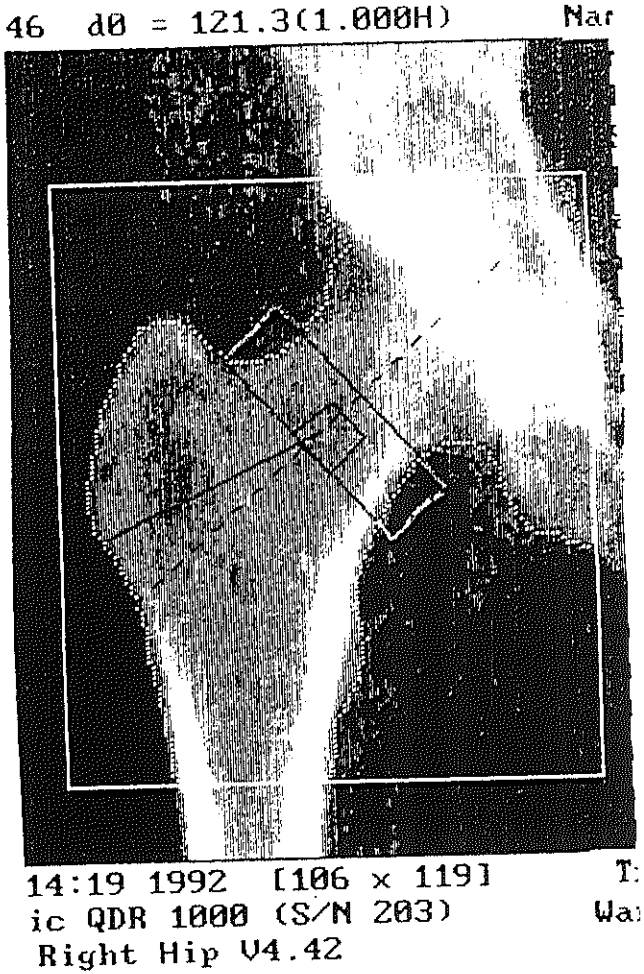
20269: carruthers

20256: [illegible]

REANALYZING BASELINE & FOLLOW UP SCANS (continued from above)







ORIGINAL FOLLOW UP ANALYSIS

NECK BMD = 0.643

(midline is crooked)

NOTCH OUTLINING

REANALYZED FOLLOW UP

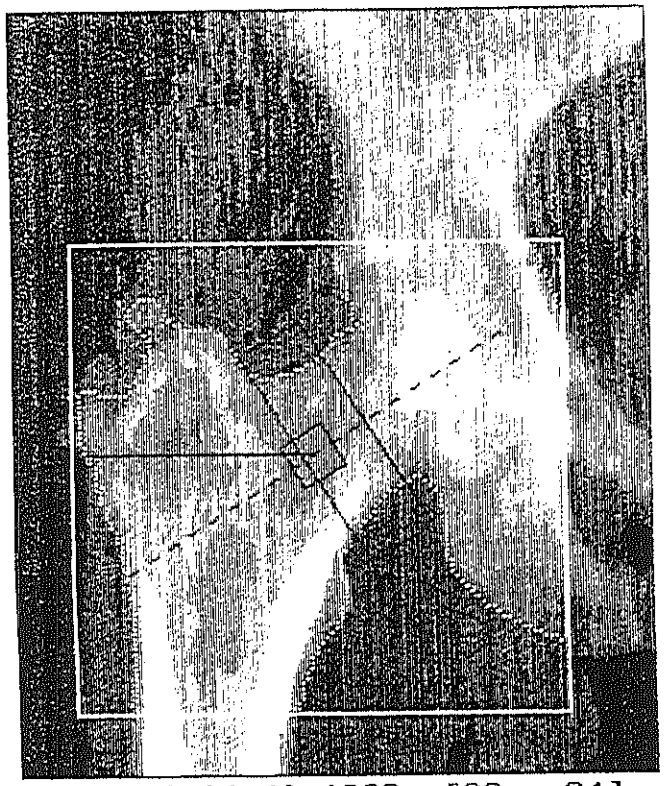
NECK BMD = 0.606

(midline is straight)

205.. : hemel

DELETING CALCIFIED TISSUE FROM HIP

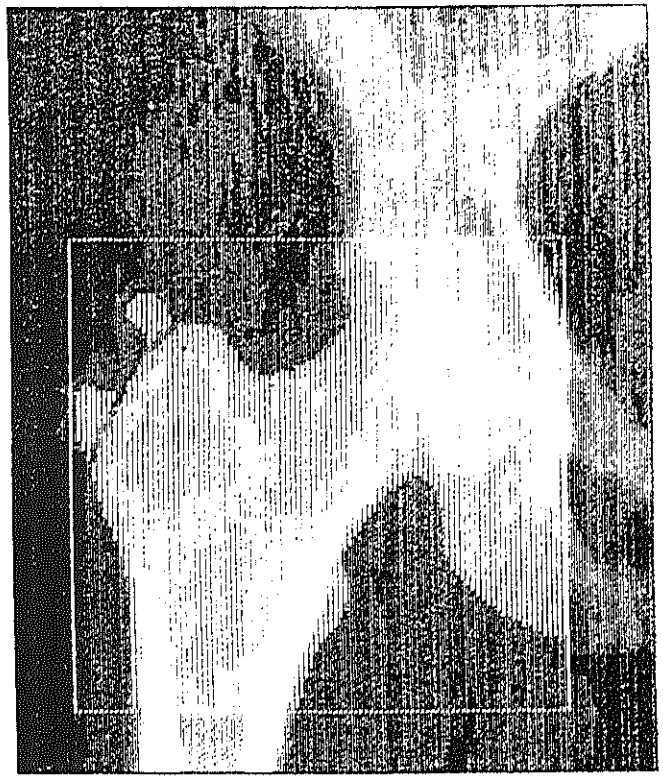
= 1.234 d0 = 116.1(1.000H) 6.72



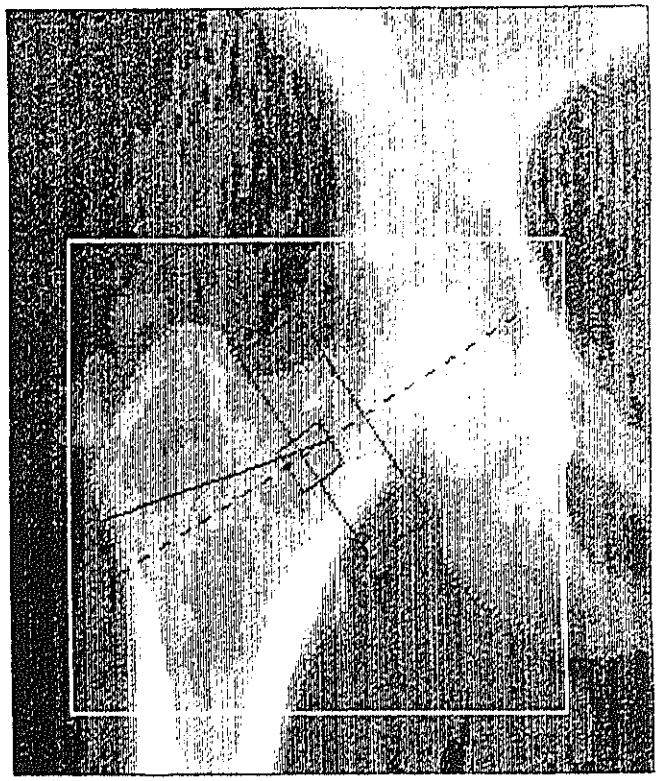
·Oct 8 14:46 1992 [98 x 94]
Hologic QDR-2000 (S/N 2162)
Array Right Hip Fast V4.42A:1

BEFORE

TROCH BMD = 0.523



= 1.234 d0 = 116.1(1.000H) 6.72



·Oct 8 15:12 1992 [98 x 94]
Hologic QDR-2000 (S/N 2162)
Array Right Hip Fast V4.42A:1

AFTER

TROCH BMD = 0.578

Sm 1073 : meharque