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mdb014 G NORM

mdb015 G CIRC B 595 864 68

mdb016 G NORM

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mdb018 G NORM

mdb019 G CIRC B 653 477 49

mdb020 G NORM

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mdb022 G NORM

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mdb024 G NORM

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mdb029 G NORM

mdb030 G MISC B 322 676 43

mdb031 G NORM

mdb032 G MISC B 388 742 66

mdb033 D NORM

mdb034 D NORM

mdb035 D NORM

mdb036 D NORM

mdb037 D NORM

mdb038 D NORM

mdb039 D NORM

mdb040 D NORM

mdb041 G NORM

mdb042 G NORM

mdb043 G NORM

mdb044 G NORM

mdb045 G NORM

mdb046 G NORM

mdb047 G NORM

mdb048 G NORM

mdb049 G NORM

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mdb051 G NORM

mdb052 G NORM

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mdb056 G NORM

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mdb058 D MISC M 318 359 27

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mdb060 F NORM

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mdb064 D NORM

mdb065 D NORM

mdb066 D NORM

mdb067 D NORM

mdb068 D NORM

mdb069 F CIRC B 462 406 44

mdb070 F NORM

mdb071 G NORM

mdb072 G ASYM M 266 517 28

mdb073 G NORM

mdb074 G NORM

mdb075 F ASYM M 468 717 23

mdb076 F NORM

mdb077 F NORM

mdb078 F NORM

mdb079 F NORM

mdb080 F CIRC B 432 149 20

mdb081 G ASYM B 492 473 131

mdb082 G NORM

mdb083 G ASYM B 544 194 38

mdb084 G NORM

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mdb087 F NORM

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mdb090 G ASYM M 510 547 49

mdb091 F CIRC B 680 494 20

mdb092 F ASYM M 423 662 43

mdb093 G NORM

mdb094 G NORM

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mdb098 F NORM

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mdb104 D ASYM B 357 365 50

mdb105 D ASYM M 516 279 98

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mdb110 D ASYM M 190 427 51

mdb111 D ASYM M 505 575 107

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mdb117 G ARCH M 480 576 84

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mdb130 D ARCH M 220 552 28

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mdb147 F NORM

mdb148 F SPIC M 326 607 174

mdb149 F NORM

mdb150 F ARCH B 351 661 62

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mdb153 F NORM

mdb154 F NORM

mdb155 F ARCH M 448 480 95

mdb156 F NORM

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mdb158 F ARCH M 540 565 88

mdb159 F NORM

mdb160 F ARCH B 536 519 61

mdb161 D NORM

mdb162 D NORM

mdb163 D ARCH B 391 365 50

mdb164 D NORM

mdb165 D ARCH B 537 490 42

mdb166 D NORM

mdb167 F ARCH B 574 657 35

mdb168 F NORM

mdb169 D NORM

mdb170 D ARCH M 489 480 82

mdb171 D ARCH M 462 627 62

mdb172 D NORM

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mdb179 D SPIC M 600 514 67

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mdb204 F SPIC B 336 399 21

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mdb206 F SPIC M 368 200 17

mdb207 D SPIC B 571 564 19

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mdb211 G CALC M 680 327 13

mdb212 G NORM

mdb213 G CALC M 547 520 45

mdb214 G NORM

mdb215 D NORM

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mdb231 F CALC M 603 538 44

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mdb233 G CALC M \*NOTE 3\*

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mdb243 D NORM

mdb244 D CIRC B 466 567 52

mdb245 F CALC M \*NOTE 3\*

mdb246 F NORM

mdb247 F NORM

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mdb249 D CALC M 544 508 48

mdb249 D CALC M 575 639 64

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mdb252 F CALC B 439 367 23

mdb253 D CALC M 733 564 28

mdb254 D NORM

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mdb256 F CALC M 400 484 37

mdb257 D NORM

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mdb264 G MISC M 596 431 36

mdb265 G MISC M 593 498 60

mdb266 G NORM

mdb267 F MISC M 793 481 56

mdb268 F NORM

mdb269 G NORM

mdb270 G CIRC M 356 945 72

mdb271 F MISC M 784 270 68

mdb272 F NORM

mdb273 F NORM

mdb274 F MISC M 127 505 123

mdb275 G NORM

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mdb281 D NORM

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mdb283 D NORM

mdb284 D NORM

mdb285 D NORM

mdb286 D NORM

mdb287 D NORM

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mdb289 D NORM

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mdb291 G NORM

mdb292 G NORM

mdb293 F NORM

mdb294 F NORM

mdb295 D NORM

mdb296 D NORM

mdb297 F NORM

mdb298 F NORM

mdb299 F NORM

mdb300 F NORM

mdb301 F NORM

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mdb306 F NORM

mdb307 F NORM

mdb308 F NORM

mdb309 F NORM

mdb310 F NORM

mdb311 F NORM

mdb312 F MISC B 240 263 20

mdb313 F NORM

mdb314 F MISC B 518 191 39

mdb315 D CIRC B 516 447 93

mdb316 D NORM

mdb317 D NORM

mdb318 D NORM

mdb319 D NORM

mdb320 D NORM

mdb321 D NORM

mdb322 D NORM

By popular request, the original MIAS Database (digitised at 50 micron pixel edge) has been reduced to 200 micron pixel edge and clipped/padded so that every image is 1024 × 1024 pixels. You are free to use the database in your scientific research but you must abide by [the licence agreement](http://peipa.essex.ac.uk/pix/mias/Licence.txt) when using [the imagery.](http://peipa.essex.ac.uk/pix/mias/)

**Credits**

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Truth-Data:

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Reference:

J Suckling *et al* (1994): *The Mammographic Image Analysis Society Digital Mammogram Database* Exerpta Medica. International Congress Series 1069 pp375-378.

**Detailed Information**

The follow list gives the films in the MIAS database and provides appropriate details as follows:

1st column:

MIAS database reference number.

2nd column:

Character of background tissue:

F Fatty

G Fatty-glandular

D Dense-glandular

3rd column:

Class of abnormality present:

CALC Calcification

CIRC Well-defined/circumscribed masses

SPIC Spiculated masses

MISC Other, ill-defined masses

ARCH Architectural distortion

ASYM Asymmetry

NORM Normal

4th column:

Severity of abnormality;

B Benign

M Malignant

5th, 6th columns:

*x,y* image-coordinates of centre of abnormality.

7th column:

Approximate radius (in pixels) of a circle enclosing the abnormality.

There are also several things you should note:

* The list is arranged in pairs of films, where each pair represents the left (even filename numbers) and right mammograms (odd filename numbers) of a single patient.
* The size of *all* the images is 1024 pixels x 1024 pixels. The images have been centered in the matrix.
* When calcifications are present, centre locations and radii apply to clusters rather than individual calcifications. Coordinate system origin is the bottom-left corner.
* In some cases calcifications are widely distributed throughout the image rather than concentrated at a single site. In these cases centre locations and radii are inappropriate and have been omitted.