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X-RAY DATASET COMPREHENSIVE ANALYSIS

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Disease: No Finding

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Total Cases: 2754

AGE STATISTICS:

Average Age : 51.1 years  
Median Age : 53.0 years  
Age Range : 9 – 94 years  
Std Deviation : 17.0 years

AGE DISTRIBUTION:

Pediatric (<18) : 96 cases ( 3.5%)  
Adult (18–65) : 2112 cases ( 76.7%)  
Elderly (>65) : 546 cases ( 19.8%)

GENDER DISTRIBUTION:

M : 1406 cases ( 51.1%)  
F : 1348 cases ( 48.9%)

VIEW POSITION DISTRIBUTION:

PA (Posterior) : 1977 cases ( 71.8%)  
AP (Anterior) : 777 cases ( 28.2%)

IMAGE QUALITY METRICS:

Brightness:

Average : 134.57  
Range : 57.96 – 216.27  
Std Deviation : 23.83  
Low (<100) : 112 cases ( 4.1%)  
Medium (100–180): 2605 cases ( 94.6%)  
High (>180) : 37 cases ( 1.3%)

Contrast (Std Dev of Pixels):

Average : 58.90  
Range : 24.91 – 88.83

Edge Density (Feature Detection):

Average : 0.0080  
Range : 0.0004 – 0.0359

Entropy (Information Content):

Average : 7.44  
Range : 4.60 – 7.86

Lung Area Ratio:

Average : 0.6105  
Range : 0.3021 - 0.9374

Sharpness (Laplacian Variance):

Average : 100.95  
Range : 9.73 - 384.21  
Potentially Blurry: 1639 cases ( 59.5%)

IMAGE RESOLUTION DISTRIBUTION:

1024x1024 : 2754 cases (100.0%)

CORRELATION ANALYSIS:

Age vs Brightness : -0.061  
Age vs Contrast : +0.039  
Age vs Edge Density : +0.024

COMMON COMBINATIONS (Gender + View):

F-PA : 1024 cases ( 37.2%)  
M-PA : 953 cases ( 34.6%)  
M-AP : 453 cases ( 16.4%)  
F-AP : 324 cases ( 11.8%)

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Disease: Infiltration  
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Total Cases: 830

AGE STATISTICS:

Average Age : 50.6 years  
Median Age : 53.0 years  
Age Range : 13 - 94 years  
Std Deviation : 16.9 years

AGE DISTRIBUTION:

Pediatric (<18) : 23 cases ( 2.8%)  
Adult (18-65) : 651 cases ( 78.4%)  
Elderly (>65) : 156 cases ( 18.8%)

GENDER DISTRIBUTION:

M : 419 cases ( 50.5%)  
F : 411 cases ( 49.5%)

VIEW POSITION DISTRIBUTION:

PA (Posterior) : 415 cases ( 50.0%)  
AP (Anterior) : 415 cases ( 50.0%)

IMAGE QUALITY METRICS:

Brightness:

Average : 125.29  
Range : 82.82 - 189.09  
Std Deviation : 20.98  
Low (<100) : 58 cases ( 7.0%)  
Medium (100-180): 769 cases ( 92.7%)  
High (>180) : 3 cases ( 0.4%)

Contrast (Std Dev of Pixels):

Average : 58.90  
Range : 21.38 - 81.30

Edge Density (Feature Detection):

Average : 0.0086  
Range : 0.0006 - 0.0347

Entropy (Information Content):

Average : 7.41  
Range : 5.91 - 7.84

Lung Area Ratio:

Average : 0.6025  
Range : 0.3153 - 0.9024

Sharpness (Laplacian Variance):

Average : 111.04  
Range : 11.36 - 303.68  
Potentially Blurry: 423 cases ( 51.0%)

IMAGE RESOLUTION DISTRIBUTION:

1024x1024 : 830 cases (100.0%)

CORRELATION ANALYSIS:

Age vs Brightness : +0.047  
Age vs Contrast : +0.077  
Age vs Edge Density : -0.014

COMMON COMBINATIONS (Gender + View):

M-AP : 227 cases ( 27.3%)  
F-PA : 223 cases ( 26.9%)  
M-PA : 192 cases ( 23.1%)  
F-AP : 188 cases ( 22.7%)

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Disease: Effusion  
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Total Cases: 487

AGE STATISTICS:

Average Age : 57.8 years  
Median Age : 58.0 years  
Age Range : 22 - 94 years

Std Deviation : 15.1 years

AGE DISTRIBUTION:

Pediatric (<18)	:	0 cases ( 0.0%)
Adult (18-65)	:	343 cases ( 70.4%)
Elderly (>65)	:	144 cases ( 29.6%)

GENDER DISTRIBUTION:

F	:	272 cases ( 55.9%)
M	:	215 cases ( 44.1%)

VIEW POSITION DISTRIBUTION:

PA (Posterior)	:	254 cases ( 52.2%)
AP (Anterior)	:	233 cases ( 47.8%)

IMAGE QUALITY METRICS:

Brightness:

Average	:	126.62
Range	:	76.59 - 192.98
Std Deviation	:	22.76
Low (<100)	:	34 cases ( 7.0%)
Medium (100-180)	:	448 cases ( 92.0%)
High (>180)	:	5 cases ( 1.0%)

Contrast (Std Dev of Pixels):

Average	:	59.66
Range	:	21.38 - 81.30

Edge Density (Feature Detection):

Average	:	0.0089
Range	:	0.0009 - 0.0357

Entropy (Information Content):

Average	:	7.41
Range	:	5.91 - 7.82

Lung Area Ratio:

Average	:	0.6012
Range	:	0.3791 - 0.8727

Sharpness (Laplacian Variance):

Average	:	111.46
Range	:	13.75 - 323.83
Potentially Blurry:	:	249 cases ( 51.1%)

IMAGE RESOLUTION DISTRIBUTION:

1024x1024	:	487 cases (100.0%)
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CORRELATION ANALYSIS:

Age vs Brightness	:	+0.092
Age vs Contrast	:	+0.039
Age vs Edge Density	:	+0.118

COMMON COMBINATIONS (Gender + View):

F-AP	:	140 cases ( 28.7%)
F-PA	:	132 cases ( 27.1%)
M-PA	:	122 cases ( 25.1%)
M-AP	:	93 cases ( 19.1%)

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Disease: Atelectasis

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Total Cases: 460

AGE STATISTICS:

Average Age	:	52.5 years
Median Age	:	54.0 years
Age Range	:	12 - 93 years
Std Deviation	:	15.9 years

AGE DISTRIBUTION:

Pediatric (<18)	:	3 cases ( 0.7%)
Adult (18-65)	:	360 cases ( 78.3%)
Elderly (>65)	:	97 cases ( 21.1%)

GENDER DISTRIBUTION:

M	:	268 cases ( 58.3%)
F	:	192 cases ( 41.7%)

VIEW POSITION DISTRIBUTION:

PA (Posterior)	:	233 cases ( 50.7%)
AP (Anterior)	:	227 cases ( 49.3%)

IMAGE QUALITY METRICS:

Brightness:

Average	:	129.61
Range	:	83.62 - 189.79
Std Deviation	:	22.22
Low (<100)	:	19 cases ( 4.1%)
Medium (100-180)	:	432 cases ( 93.9%)
High (>180)	:	9 cases ( 2.0%)

Contrast (Std Dev of Pixels):

Average	:	58.75
Range	:	21.38 - 82.93

Edge Density (Feature Detection):

Average	:	0.0080
Range	:	0.0007 - 0.0357

Entropy (Information Content):

Average	:	7.44
Range	:	5.84 - 7.85

Lung Area Ratio:

Average : 0.5971  
Range : 0.3472 – 0.8963

Sharpness (Laplacian Variance):

Average : 117.38  
Range : 13.65 – 303.68  
Potentially Blurry: 217 cases ( 47.2%)

IMAGE RESOLUTION DISTRIBUTION:

1024x1024 : 460 cases (100.0%)

CORRELATION ANALYSIS:

Age vs Brightness : +0.011  
Age vs Contrast : +0.062  
Age vs Edge Density : +0.053

COMMON COMBINATIONS (Gender + View):

M-AP : 135 cases ( 29.3%)  
M-PA : 133 cases ( 28.9%)  
F-PA : 100 cases ( 21.7%)  
F-AP : 92 cases ( 20.0%)

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Disease: Nodule  
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Total Cases: 214

AGE STATISTICS:

Average Age : 52.6 years  
Median Age : 54.0 years  
Age Range : 13 – 93 years  
Std Deviation : 18.5 years

AGE DISTRIBUTION:

Pediatric (<18) : 3 cases ( 1.4%)  
Adult (18–65) : 150 cases ( 70.1%)  
Elderly (>65) : 61 cases ( 28.5%)

GENDER DISTRIBUTION:

M : 116 cases ( 54.2%)  
F : 98 cases ( 45.8%)

VIEW POSITION DISTRIBUTION:

PA (Posterior) : 146 cases ( 68.2%)  
AP (Anterior) : 68 cases ( 31.8%)

IMAGE QUALITY METRICS:

Brightness:

Average : 131.58  
Range : 82.62 - 182.30  
Std Deviation : 25.46  
Low (<100) : 18 cases ( 8.4%)  
Medium (100-180): 195 cases ( 91.1%)  
High (>180) : 1 cases ( 0.5%)

Contrast (Std Dev of Pixels):

Average : 58.76  
Range : 30.58 - 83.71

Edge Density (Feature Detection):

Average : 0.0086  
Range : 0.0009 - 0.0347

Entropy (Information Content):

Average : 7.40  
Range : 6.26 - 7.82

Lung Area Ratio:

Average : 0.6146  
Range : 0.4004 - 0.8800

Sharpness (Laplacian Variance):

Average : 102.08  
Range : 15.16 - 298.87  
Potentially Blurry: 117 cases ( 54.7%)

IMAGE RESOLUTION DISTRIBUTION:

1024x1024 : 214 cases (100.0%)

CORRELATION ANALYSIS:

Age vs Brightness : +0.020  
Age vs Contrast : +0.088  
Age vs Edge Density : +0.022

COMMON COMBINATIONS (Gender + View):

F-PA : 80 cases ( 37.4%)  
M-PA : 66 cases ( 30.8%)  
M-AP : 50 cases ( 23.4%)  
F-AP : 18 cases ( 8.4%)

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Disease: Consolidation  
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Total Cases: 205

AGE STATISTICS:

Average Age : 48.4 years  
Median Age : 50.0 years  
Age Range : 13 - 93 years

Std Deviation : 16.6 years

AGE DISTRIBUTION:

Pediatric (<18)	:	8 cases ( 3.9%)
Adult (18-65)	:	170 cases ( 82.9%)
Elderly (>65)	:	27 cases ( 13.2%)

GENDER DISTRIBUTION:

M	:	109 cases ( 53.2%)
F	:	96 cases ( 46.8%)

VIEW POSITION DISTRIBUTION:

AP (Anterior)	:	132 cases ( 64.4%)
PA (Posterior)	:	73 cases ( 35.6%)

IMAGE QUALITY METRICS:

Brightness:

Average	:	123.70
Range	:	85.15 - 177.68
Std Deviation	:	21.06
Low (<100)	:	19 cases ( 9.3%)
Medium (100-180)	:	186 cases ( 90.7%)
High (>180)	:	0 cases ( 0.0%)

Contrast (Std Dev of Pixels):

Average	:	56.87
Range	:	35.05 - 77.03

Edge Density (Feature Detection):

Average	:	0.0088
Range	:	0.0026 - 0.0357

Entropy (Information Content):

Average	:	7.34
Range	:	6.26 - 7.83

Lung Area Ratio:

Average	:	0.6311
Range	:	0.3676 - 0.9023

Sharpness (Laplacian Variance):

Average	:	119.16
Range	:	19.45 - 295.85
Potentially Blurry:	:	84 cases ( 41.0%)

IMAGE RESOLUTION DISTRIBUTION:

1024x1024	:	205 cases (100.0%)
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CORRELATION ANALYSIS:

Age vs Brightness	:	+0.178
Age vs Contrast	:	-0.115
Age vs Edge Density	:	+0.014



COMMON COMBINATIONS (Gender + View):

M-AP	:	68 cases ( 33.2%)
F-AP	:	64 cases ( 31.2%)
M-PA	:	41 cases ( 20.0%)
F-PA	:	32 cases ( 15.6%)

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Disease: Pneumothorax

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Total Cases: 199

AGE STATISTICS:

Average Age	:	45.8 years
Median Age	:	43.0 years
Age Range	:	14 – 85 years
Std Deviation	:	18.9 years

AGE DISTRIBUTION:

Pediatric (<18)	:	2 cases ( 1.0%)
Adult (18-65)	:	160 cases ( 80.4%)
Elderly (>65)	:	37 cases ( 18.6%)

GENDER DISTRIBUTION:

M	:	152 cases ( 76.4%)
F	:	47 cases ( 23.6%)

VIEW POSITION DISTRIBUTION:

PA (Posterior)	:	120 cases ( 60.3%)
AP (Anterior)	:	79 cases ( 39.7%)

IMAGE QUALITY METRICS:

Brightness:

Average	:	126.36
Range	:	79.79 – 189.09
Std Deviation	:	24.25
Low (<100)	:	32 cases ( 16.1%)
Medium (100-180)	:	166 cases ( 83.4%)
High (>180)	:	1 cases ( 0.5%)

Contrast (Std Dev of Pixels):

Average	:	59.61
Range	:	36.01 – 77.84

Edge Density (Feature Detection):

Average	:	0.0107
Range	:	0.0004 – 0.0297

Entropy (Information Content):

Average	:	7.39
Range	:	6.21 – 7.85

Lung Area Ratio:

Average : 0.6270  
Range : 0.4015 – 0.9023

Sharpness (Laplacian Variance):

Average : 106.36  
Range : 11.36 – 323.83  
Potentially Blurry: 101 cases ( 50.8%)

IMAGE RESOLUTION DISTRIBUTION:

1024x1024 : 199 cases (100.0%)

CORRELATION ANALYSIS:

Age vs Brightness : -0.090  
Age vs Contrast : -0.005  
Age vs Edge Density : +0.134

COMMON COMBINATIONS (Gender + View):

M-PA : 88 cases ( 44.2%)  
M-AP : 64 cases ( 32.2%)  
F-PA : 32 cases ( 16.1%)  
F-AP : 15 cases ( 7.5%)

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Disease: Cardiomegaly  
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Total Cases: 196

AGE STATISTICS:

Average Age : 58.8 years  
Median Age : 58.0 years  
Age Range : 13 – 87 years  
Std Deviation : 13.0 years

AGE DISTRIBUTION:

Pediatric (<18) : 1 cases ( 0.5%)  
Adult (18-65) : 140 cases ( 71.4%)  
Elderly (>65) : 55 cases ( 28.1%)

GENDER DISTRIBUTION:

F : 136 cases ( 69.4%)  
M : 60 cases ( 30.6%)

VIEW POSITION DISTRIBUTION:

PA (Posterior) : 123 cases ( 62.8%)  
AP (Anterior) : 73 cases ( 37.2%)

IMAGE QUALITY METRICS:

Brightness:

Average : 131.52  
Range : 86.14 - 178.84  
Std Deviation : 25.01  
Low (<100) : 17 cases ( 8.7%)  
Medium (100-180): 179 cases ( 91.3%)  
High (>180) : 0 cases ( 0.0%)

Contrast (Std Dev of Pixels):

Average : 59.94  
Range : 27.66 - 78.92

Edge Density (Feature Detection):

Average : 0.0087  
Range : 0.0012 - 0.0222

Entropy (Information Content):

Average : 7.41  
Range : 6.43 - 7.87

Lung Area Ratio:

Average : 0.6170  
Range : 0.3968 - 0.9024

Sharpness (Laplacian Variance):

Average : 98.49  
Range : 15.33 - 347.98  
Potentially Blurry: 115 cases ( 58.7%)

IMAGE RESOLUTION DISTRIBUTION:

1024x1024 : 196 cases (100.0%)

CORRELATION ANALYSIS:

Age vs Brightness : +0.072  
Age vs Contrast : -0.032  
Age vs Edge Density : +0.008

COMMON COMBINATIONS (Gender + View):

F-PA : 80 cases ( 40.8%)  
F-AP : 56 cases ( 28.6%)  
M-PA : 43 cases ( 21.9%)  
M-AP : 17 cases ( 8.7%)

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Disease: Fibrosis  
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Total Cases: 172

AGE STATISTICS:

Average Age : 54.3 years  
Median Age : 54.0 years  
Age Range : 22 - 93 years

Std Deviation : 16.0 years

AGE DISTRIBUTION:

Pediatric (<18)	:	0 cases ( 0.0%)
Adult (18-65)	:	127 cases ( 73.8%)
Elderly (>65)	:	45 cases ( 26.2%)

GENDER DISTRIBUTION:

M	:	96 cases ( 55.8%)
F	:	76 cases ( 44.2%)

VIEW POSITION DISTRIBUTION:

PA (Posterior)	:	144 cases ( 83.7%)
AP (Anterior)	:	28 cases ( 16.3%)

IMAGE QUALITY METRICS:

Brightness:

Average	:	132.30
Range	:	80.84 - 184.47
Std Deviation	:	25.36
Low (<100)	:	16 cases ( 9.3%)
Medium (100-180)	:	155 cases ( 90.1%)
High (>180)	:	1 cases ( 0.6%)

Contrast (Std Dev of Pixels):

Average	:	62.31
Range	:	36.90 - 84.42

Edge Density (Feature Detection):

Average	:	0.0088
Range	:	0.0009 - 0.0246

Entropy (Information Content):

Average	:	7.48
Range	:	6.28 - 7.83

Lung Area Ratio:

Average	:	0.5870
Range	:	0.3802 - 0.8978

Sharpness (Laplacian Variance):

Average	:	94.21
Range	:	14.95 - 296.96
Potentially Blurry:	:	113 cases ( 65.7%)

IMAGE RESOLUTION DISTRIBUTION:

1024x1024	:	172 cases (100.0%)
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CORRELATION ANALYSIS:

Age vs Brightness	:	+0.012
Age vs Contrast	:	+0.056
Age vs Edge Density	:	-0.074

COMMON COMBINATIONS (Gender + View):

M-PA	:	75 cases ( 43.6%)
F-PA	:	69 cases ( 40.1%)
M-AP	:	21 cases ( 12.2%)
F-AP	:	7 cases ( 4.1%)

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Disease: Pleural\_Thickening

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Total Cases: 165

AGE STATISTICS:

Average Age	:	52.8 years
Median Age	:	56.0 years
Age Range	:	13 - 91 years
Std Deviation	:	18.5 years

AGE DISTRIBUTION:

Pediatric (<18)	:	4 cases ( 2.4%)
Adult (18-65)	:	120 cases ( 72.7%)
Elderly (>65)	:	41 cases ( 24.8%)

GENDER DISTRIBUTION:

M	:	111 cases ( 67.3%)
F	:	54 cases ( 32.7%)

VIEW POSITION DISTRIBUTION:

PA (Posterior)	:	123 cases ( 74.5%)
AP (Anterior)	:	42 cases ( 25.5%)

IMAGE QUALITY METRICS:

Brightness:

Average	:	130.31
Range	:	82.62 - 189.09
Std Deviation	:	24.58
Low (<100)	:	10 cases ( 6.1%)
Medium (100-180)	:	153 cases ( 92.7%)
High (>180)	:	2 cases ( 1.2%)

Contrast (Std Dev of Pixels):

Average	:	59.57
Range	:	21.96 - 81.30

Edge Density (Feature Detection):

Average	:	0.0092
Range	:	0.0014 - 0.0357

Entropy (Information Content):

Average	:	7.42
Range	:	6.04 - 7.83

Lung Area Ratio:

Average : 0.6008  
Range : 0.3472 – 0.8675

Sharpness (Laplacian Variance):

Average : 96.18  
Range : 11.36 – 302.14  
Potentially Blurry: 101 cases ( 61.2%)

IMAGE RESOLUTION DISTRIBUTION:

1024x1024 : 165 cases (100.0%)

CORRELATION ANALYSIS:

Age vs Brightness : -0.084  
Age vs Contrast : +0.082  
Age vs Edge Density : +0.107

COMMON COMBINATIONS (Gender + View):

M-PA : 79 cases ( 47.9%)  
F-PA : 44 cases ( 26.7%)  
M-AP : 32 cases ( 19.4%)  
F-AP : 10 cases ( 6.1%)

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Disease: Mass  
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Total Cases: 161

AGE STATISTICS:

Average Age : 56.2 years  
Median Age : 57.0 years  
Age Range : 13 – 91 years  
Std Deviation : 17.4 years

AGE DISTRIBUTION:

Pediatric (<18) : 2 cases ( 1.2%)  
Adult (18-65) : 113 cases ( 70.2%)  
Elderly (>65) : 46 cases ( 28.6%)

GENDER DISTRIBUTION:

M : 104 cases ( 64.6%)  
F : 57 cases ( 35.4%)

VIEW POSITION DISTRIBUTION:

PA (Posterior) : 105 cases ( 65.2%)  
AP (Anterior) : 56 cases ( 34.8%)

IMAGE QUALITY METRICS:

Brightness:

Average : 133.01  
Range : 93.52 - 187.04  
Std Deviation : 24.01  
Low (<100) : 5 cases ( 3.1%)  
Medium (100-180): 155 cases ( 96.3%)  
High (>180) : 1 cases ( 0.6%)

Contrast (Std Dev of Pixels):

Average : 59.91  
Range : 31.55 - 80.61

Edge Density (Feature Detection):

Average : 0.0090  
Range : 0.0014 - 0.0357

Entropy (Information Content):

Average : 7.46  
Range : 6.19 - 7.82

Lung Area Ratio:

Average : 0.6161  
Range : 0.3472 - 0.8800

Sharpness (Laplacian Variance):

Average : 114.91  
Range : 14.74 - 333.66  
Potentially Blurry: 86 cases ( 53.4%)

IMAGE RESOLUTION DISTRIBUTION:

1024x1024 : 161 cases (100.0%)

CORRELATION ANALYSIS:

Age vs Brightness : -0.081  
Age vs Contrast : +0.055  
Age vs Edge Density : -0.014

COMMON COMBINATIONS (Gender + View):

M-PA : 65 cases ( 40.4%)  
F-PA : 40 cases ( 24.8%)  
M-AP : 39 cases ( 24.2%)  
F-AP : 17 cases ( 10.6%)

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Disease: Emphysema  
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Total Cases: 125

AGE STATISTICS:

Average Age : 56.0 years  
Median Age : 57.0 years  
Age Range : 18 - 87 years

Std Deviation : 15.3 years

AGE DISTRIBUTION:

Pediatric (<18)	:	0 cases ( 0.0%)
Adult (18-65)	:	93 cases ( 74.4%)
Elderly (>65)	:	32 cases ( 25.6%)

GENDER DISTRIBUTION:

M	:	76 cases ( 60.8%)
F	:	49 cases ( 39.2%)

VIEW POSITION DISTRIBUTION:

PA (Posterior)	:	75 cases ( 60.0%)
AP (Anterior)	:	50 cases ( 40.0%)

IMAGE QUALITY METRICS:

Brightness:

Average	:	131.62
Range	:	82.82 - 189.35
Std Deviation	:	24.37
Low (<100)	:	7 cases ( 5.6%)
Medium (100-180)	:	116 cases ( 92.8%)
High (>180)	:	2 cases ( 1.6%)

Contrast (Std Dev of Pixels):

Average	:	56.89
Range	:	28.91 - 76.05

Edge Density (Feature Detection):

Average	:	0.0090
Range	:	0.0021 - 0.0265

Entropy (Information Content):

Average	:	7.40
Range	:	5.84 - 7.85

Lung Area Ratio:

Average	:	0.6290
Range	:	0.4259 - 0.8978

Sharpness (Laplacian Variance):

Average	:	113.10
Range	:	16.43 - 263.27
Potentially Blurry:	:	64 cases ( 51.2%)

IMAGE RESOLUTION DISTRIBUTION:

1024x1024	:	125 cases (100.0%)
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CORRELATION ANALYSIS:

Age vs Brightness	:	+0.172
Age vs Contrast	:	+0.054
Age vs Edge Density	:	+0.074



COMMON COMBINATIONS (Gender + View):

M-PA	:	40 cases ( 32.0%)
M-AP	:	36 cases ( 28.8%)
F-PA	:	35 cases ( 28.0%)
F-AP	:	14 cases ( 11.2%)

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Disease: Edema

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Total Cases: 90

AGE STATISTICS:

Average Age	:	47.8 years
Median Age	:	55.0 years
Age Range	:	13 - 77 years
Std Deviation	:	13.6 years

AGE DISTRIBUTION:

Pediatric (<18)	:	1 cases ( 1.1%)
Adult (18-65)	:	84 cases ( 93.3%)
Elderly (>65)	:	5 cases ( 5.6%)

GENDER DISTRIBUTION:

F	:	56 cases ( 62.2%)
M	:	34 cases ( 37.8%)

VIEW POSITION DISTRIBUTION:

AP (Anterior)	:	79 cases ( 87.8%)
PA (Posterior)	:	11 cases ( 12.2%)

IMAGE QUALITY METRICS:

Brightness:

Average	:	122.50
Range	:	90.07 - 168.43
Std Deviation	:	18.46
Low (<100)	:	2 cases ( 2.2%)
Medium (100-180)	:	88 cases ( 97.8%)
High (>180)	:	0 cases ( 0.0%)

Contrast (Std Dev of Pixels):

Average	:	56.83
Range	:	32.43 - 81.15

Edge Density (Feature Detection):

Average	:	0.0075
Range	:	0.0022 - 0.0176

Entropy (Information Content):

Average	:	7.41
Range	:	6.13 - 7.75

Lung Area Ratio:

Average : 0.5915  
Range : 0.3538 – 0.8818

Sharpness (Laplacian Variance):

Average : 136.19  
Range : 12.94 – 261.65  
Potentially Blurry: 25 cases ( 27.8%)

IMAGE RESOLUTION DISTRIBUTION:

1024x1024 : 90 cases (100.0%)

CORRELATION ANALYSIS:

Age vs Brightness : +0.206  
Age vs Contrast : +0.131  
Age vs Edge Density : +0.161

COMMON COMBINATIONS (Gender + View):

F-AP : 47 cases ( 52.2%)  
M-AP : 32 cases ( 35.6%)  
F-PA : 9 cases ( 10.0%)  
M-PA : 2 cases ( 2.2%)

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Disease: Pneumonia  
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Total Cases: 65

AGE STATISTICS:

Average Age : 46.6 years  
Median Age : 44.0 years  
Age Range : 13 – 83 years  
Std Deviation : 17.6 years

AGE DISTRIBUTION:

Pediatric (<18) : 2 cases ( 3.1%)  
Adult (18–65) : 53 cases ( 81.5%)  
Elderly (>65) : 10 cases ( 15.4%)

GENDER DISTRIBUTION:

M : 39 cases ( 60.0%)  
F : 26 cases ( 40.0%)

VIEW POSITION DISTRIBUTION:

AP (Anterior) : 37 cases ( 56.9%)  
PA (Posterior) : 28 cases ( 43.1%)

IMAGE QUALITY METRICS:

Brightness:

Average : 129.00  
Range : 88.74 - 169.64  
Std Deviation : 22.54  
Low (<100) : 3 cases ( 4.6%)  
Medium (100-180): 62 cases ( 95.4%)  
High (>180) : 0 cases ( 0.0%)

Contrast (Std Dev of Pixels):

Average : 57.67  
Range : 21.96 - 74.55

Edge Density (Feature Detection):

Average : 0.0084  
Range : 0.0019 - 0.0246

Entropy (Information Content):

Average : 7.38  
Range : 6.04 - 7.77

Lung Area Ratio:

Average : 0.6296  
Range : 0.4219 - 0.8571

Sharpness (Laplacian Variance):

Average : 115.42  
Range : 19.07 - 316.97  
Potentially Blurry: 29 cases ( 44.6%)

IMAGE RESOLUTION DISTRIBUTION:

1024x1024 : 65 cases (100.0%)

CORRELATION ANALYSIS:

Age vs Brightness : +0.217  
Age vs Contrast : -0.042  
Age vs Edge Density : +0.112

COMMON COMBINATIONS (Gender + View):

M-AP : 25 cases ( 38.5%)  
F-PA : 14 cases ( 21.5%)  
M-PA : 14 cases ( 21.5%)  
F-AP : 12 cases ( 18.5%)

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Disease: Hernia  
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Total Cases: 27

AGE STATISTICS:

Average Age : 69.0 years  
Median Age : 75.0 years  
Age Range : 31 - 87 years

Std Deviation : 15.2 years

AGE DISTRIBUTION:

Pediatric (<18)	:	0 cases ( 0.0%)
Adult (18-65)	:	9 cases ( 33.3%)
Elderly (>65)	:	18 cases ( 66.7%)

GENDER DISTRIBUTION:

F	:	25 cases ( 92.6%)
M	:	2 cases ( 7.4%)

VIEW POSITION DISTRIBUTION:

PA (Posterior)	:	27 cases (100.0%)
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IMAGE QUALITY METRICS:

Brightness:

Average	:	131.93
Range	:	92.44 - 173.44
Std Deviation	:	22.99
Low (<100)	:	2 cases ( 7.4%)
Medium (100-180)	:	25 cases ( 92.6%)
High (>180)	:	0 cases ( 0.0%)

Contrast (Std Dev of Pixels):

Average	:	68.07
Range	:	37.78 - 80.47

Edge Density (Feature Detection):

Average	:	0.0085
Range	:	0.0029 - 0.0156

Entropy (Information Content):

Average	:	7.53
Range	:	6.66 - 7.85

Lung Area Ratio:

Average	:	0.5770
Range	:	0.4002 - 0.7000

Sharpness (Laplacian Variance):

Average	:	101.96
Range	:	21.01 - 221.98
Potentially Blurry:	:	16 cases ( 59.3%)

IMAGE RESOLUTION DISTRIBUTION:

1024x1024	:	27 cases (100.0%)
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CORRELATION ANALYSIS:

Age vs Brightness	:	+0.080
Age vs Contrast	:	+0.444
Age vs Edge Density	:	+0.372

COMMON COMBINATIONS (Gender + View):

F-PA	:	25 cases ( 92.6%)
M-PA	:	2 cases ( 7.4%)

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END OF ANALYSIS

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