

# main

September 12, 2024

```
[14]: import numpy as np
import pandas as pd
import matplotlib.pyplot as plt
import sklearn as sk

calc_case_desc_test_set = pd.read_csv("calc_case_description_test_set.csv")
calc_case_desc_train_set = pd.read_csv("calc_case_description_train_set.csv")
dicom_info = pd.read_csv("dicom_info.csv")
mass_case_desc_test_set = pd.read_csv("mass_case_description_test_set.csv")
mass_case_desc_train_set = pd.read_csv("mass_case_description_train_set.csv")
meta = pd.read_csv("meta.csv")
```

Calculation Case Description Test Set

```
[22]: calc_case_desc_test_set.head(10)
```

```
[22]:  patient_id  breast density left or right breast image view  abnormality id \
0      P_00038                2             LEFT          CC            1
1      P_00038                2             LEFT          MLO            1
2      P_00038                2             RIGHT         CC            1
3      P_00038                2             RIGHT         CC            2
4      P_00038                2             RIGHT          MLO            1
5      P_00038                2             RIGHT          MLO            2
6      P_00041                1             LEFT          CC            2
7      P_00041                1             LEFT          MLO            2
8      P_00077                2             LEFT          CC            1
9      P_00077                2             LEFT          MLO            1
```

```
      abnormality type      calc type calc distribution  assessment \
0      calcification  PUNCTATE-PLEOMORPHIC      CLUSTERED            4
1      calcification  PUNCTATE-PLEOMORPHIC      CLUSTERED            4
2      calcification      VASCULAR              NaN            2
3      calcification      VASCULAR              NaN            2
4      calcification      VASCULAR              NaN            2
5      calcification      VASCULAR              NaN            2
6      calcification      LUCENT_CENTER          NaN            2
7      calcification      LUCENT_CENTER          NaN            2
8      calcification  ROUND_AND_REGULAR          NaN            2
```

9	calcification	ROUND_AND_REGULAR	NaN	2
---	---------------	-------------------	-----	---

	pathology	subtlety \
0	BENIGN	2
1	BENIGN	2
2	BENIGN_WITHOUT_CALLBACK	5
3	BENIGN_WITHOUT_CALLBACK	5
4	BENIGN_WITHOUT_CALLBACK	5
5	BENIGN_WITHOUT_CALLBACK	5
6	BENIGN_WITHOUT_CALLBACK	5
7	BENIGN_WITHOUT_CALLBACK	5
8	BENIGN_WITHOUT_CALLBACK	3
9	BENIGN_WITHOUT_CALLBACK	3

	image file path \
0	Calc-Test_P_00038_LEFT_CC/1.3.6.1.4.1.9590.100...
1	Calc-Test_P_00038_LEFT_MLO/1.3.6.1.4.1.9590.10...
2	Calc-Test_P_00038_RIGHT_CC/1.3.6.1.4.1.9590.10...
3	Calc-Test_P_00038_RIGHT_CC/1.3.6.1.4.1.9590.10...
4	Calc-Test_P_00038_RIGHT_MLO/1.3.6.1.4.1.9590.1...
5	Calc-Test_P_00038_RIGHT_MLO/1.3.6.1.4.1.9590.1...
6	Calc-Test_P_00041_LEFT_CC/1.3.6.1.4.1.9590.100...
7	Calc-Test_P_00041_LEFT_MLO/1.3.6.1.4.1.9590.10...
8	Calc-Test_P_00077_LEFT_CC/1.3.6.1.4.1.9590.100...
9	Calc-Test_P_00077_LEFT_MLO/1.3.6.1.4.1.9590.10...

	cropped image file path \
0	Calc-Test_P_00038_LEFT_CC_1/1.3.6.1.4.1.9590.1...
1	Calc-Test_P_00038_LEFT_MLO_1/1.3.6.1.4.1.9590...
2	Calc-Test_P_00038_RIGHT_CC_1/1.3.6.1.4.1.9590...
3	Calc-Test_P_00038_RIGHT_CC_2/1.3.6.1.4.1.9590...
4	Calc-Test_P_00038_RIGHT_MLO_1/1.3.6.1.4.1.9590...
5	Calc-Test_P_00038_RIGHT_MLO_2/1.3.6.1.4.1.9590...
6	Calc-Test_P_00041_LEFT_CC_2/1.3.6.1.4.1.9590.1...
7	Calc-Test_P_00041_LEFT_MLO_2/1.3.6.1.4.1.9590...
8	Calc-Test_P_00077_LEFT_CC_1/1.3.6.1.4.1.9590.1...
9	Calc-Test_P_00077_LEFT_MLO_1/1.3.6.1.4.1.9590...

	ROI mask file path
0	Calc-Test_P_00038_LEFT_CC_1/1.3.6.1.4.1.9590.1...
1	Calc-Test_P_00038_LEFT_MLO_1/1.3.6.1.4.1.9590...
2	Calc-Test_P_00038_RIGHT_CC_1/1.3.6.1.4.1.9590...
3	Calc-Test_P_00038_RIGHT_CC_2/1.3.6.1.4.1.9590...
4	Calc-Test_P_00038_RIGHT_MLO_1/1.3.6.1.4.1.9590...
5	Calc-Test_P_00038_RIGHT_MLO_2/1.3.6.1.4.1.9590...
6	Calc-Test_P_00041_LEFT_CC_2/1.3.6.1.4.1.9590.1...
7	Calc-Test_P_00041_LEFT_MLO_2/1.3.6.1.4.1.9590...

```

8 Calc-Test_P_00077_LEFT_CC_1/1.3.6.1.4.1.9590.1...
9 Calc-Test_P_00077_LEFT_MLO_1/1.3.6.1.4.1.9590...

```

#### Calculation Case Description Train Set

```
[20]: calc_case_desc_train_set.head(10)
```

```
[20]:  patient_id  breast density left or right breast image view  abnormality id  \
0      P_00005                3                RIGHT          CC          1
1      P_00005                3                RIGHT          MLO          1
2      P_00007                4                LEFT           CC          1
3      P_00007                4                LEFT          MLO          1
4      P_00008                1                LEFT           CC          1
```

```

      abnormality type      calc type  calc distribution  assessment  \
0      calcification      AMORPHOUS      CLUSTERED          3
1      calcification      AMORPHOUS      CLUSTERED          3
2      calcification      PLEOMORPHIC      LINEAR            4
3      calcification      PLEOMORPHIC      LINEAR            4
4      calcification                NaN      REGIONAL          2

```

```

      pathology  subtlety  \
0      MALIGNANT          3
1      MALIGNANT          3
2      BENIGN            4
3      BENIGN            4
4  BENIGN_WITHOUT_CALLBACK          3

```

```

      image file path  \
0  Calc-Training_P_00005_RIGHT_CC/1.3.6.1.4.1.959...
1  Calc-Training_P_00005_RIGHT_MLO/1.3.6.1.4.1.95...
2  Calc-Training_P_00007_LEFT_CC/1.3.6.1.4.1.9590...
3  Calc-Training_P_00007_LEFT_MLO/1.3.6.1.4.1.959...
4  Calc-Training_P_00008_LEFT_CC/1.3.6.1.4.1.9590...

```

```

      cropped image file path  \
0  Calc-Training_P_00005_RIGHT_CC_1/1.3.6.1.4.1.9...
1  Calc-Training_P_00005_RIGHT_MLO_1/1.3.6.1.4.1...
2  Calc-Training_P_00007_LEFT_CC_1/1.3.6.1.4.1.95...
3  Calc-Training_P_00007_LEFT_MLO_1/1.3.6.1.4.1.9...
4  Calc-Training_P_00008_LEFT_CC_1/1.3.6.1.4.1.95...

```

```

      ROI mask file path
0  Calc-Training_P_00005_RIGHT_CC_1/1.3.6.1.4.1.9...
1  Calc-Training_P_00005_RIGHT_MLO_1/1.3.6.1.4.1...
2  Calc-Training_P_00007_LEFT_CC_1/1.3.6.1.4.1.95...
3  Calc-Training_P_00007_LEFT_MLO_1/1.3.6.1.4.1.9...

```

4 Calc-Training\_P\_00008\_LEFT\_CC\_1/1.3.6.1.4.1.95...

Dicom Information (Digital Imaging and Communications in Medicine)

```
[24]: dicom_info.head(10)
```

```
[24]:
```

	file_path \
0	CBIS-DDSM/dicom/1.3.6.1.4.1.9590.100.1.2.12930...
1	CBIS-DDSM/dicom/1.3.6.1.4.1.9590.100.1.2.24838...
2	CBIS-DDSM/dicom/1.3.6.1.4.1.9590.100.1.2.26721...
3	CBIS-DDSM/dicom/1.3.6.1.4.1.9590.100.1.2.38118...
4	CBIS-DDSM/dicom/1.3.6.1.4.1.9590.100.1.2.38118...
5	CBIS-DDSM/dicom/1.3.6.1.4.1.9590.100.1.2.15333...
6	CBIS-DDSM/dicom/1.3.6.1.4.1.9590.100.1.2.15333...
7	CBIS-DDSM/dicom/1.3.6.1.4.1.9590.100.1.2.17899...
8	CBIS-DDSM/dicom/1.3.6.1.4.1.9590.100.1.2.17899...
9	CBIS-DDSM/dicom/1.3.6.1.4.1.9590.100.1.2.41183...

	image_path	AccessionNumber \
0	CBIS-DDSM/jpeg/1.3.6.1.4.1.9590.100.1.2.129308...	NaN
1	CBIS-DDSM/jpeg/1.3.6.1.4.1.9590.100.1.2.248386...	NaN
2	CBIS-DDSM/jpeg/1.3.6.1.4.1.9590.100.1.2.267213...	NaN
3	CBIS-DDSM/jpeg/1.3.6.1.4.1.9590.100.1.2.381187...	NaN
4	CBIS-DDSM/jpeg/1.3.6.1.4.1.9590.100.1.2.381187...	NaN
5	CBIS-DDSM/jpeg/1.3.6.1.4.1.9590.100.1.2.153339...	NaN
6	CBIS-DDSM/jpeg/1.3.6.1.4.1.9590.100.1.2.153339...	NaN
7	CBIS-DDSM/jpeg/1.3.6.1.4.1.9590.100.1.2.178994...	NaN
8	CBIS-DDSM/jpeg/1.3.6.1.4.1.9590.100.1.2.178994...	NaN
9	CBIS-DDSM/jpeg/1.3.6.1.4.1.9590.100.1.2.411833...	NaN

	BitsAllocated	BitsStored	BodyPartExamined	Columns	ContentDate \
0	16	16	BREAST	351	20160426
1	16	16	BREAST	3526	20160426
2	16	16	BREAST	1546	20160503
3	16	16	BREAST	97	20160503
4	8	8	Left Breast	3104	20160503
5	8	8	BREAST	1981	20160503
6	16	16	BREAST	393	20160503
7	16	16	BREAST	611	20160503
8	8	8	BREAST	3571	20160503
9	8	8	BREAST	2371	20160503

	ContentTime	ConversionType	...	\
0	131732.685	WSD	...	
1	143829.101	WSD	...	
2	111956.298	WSD	...	
3	115347.770	WSD	...	

4	115347.770	WSD	...
5	111620.055	WSD	...
6	111620.055	WSD	...
7	122938.838	WSD	...
8	122938.838	WSD	...
9	131321.302	WSD	...

	SecondaryCaptureDeviceManufacturerModelName	SeriesDescription	\
0	MATLAB	cropped images	
1	MATLAB	full mammogram images	
2	MATLAB	full mammogram images	
3	MATLAB	cropped images	
4	MATLAB	NaN	
5	MATLAB	ROI mask images	
6	MATLAB	cropped images	
7	MATLAB	cropped images	
8	MATLAB	ROI mask images	
9	MATLAB	ROI mask images	

	SeriesInstanceUID	SeriesNumber	\
0	1.3.6.1.4.1.9590.100.1.2.129308726812851964007...	1	
1	1.3.6.1.4.1.9590.100.1.2.248386742010678582309...	1	
2	1.3.6.1.4.1.9590.100.1.2.267213171011171858918...	1	
3	1.3.6.1.4.1.9590.100.1.2.381187369611524586537...	1	
4	1.3.6.1.4.1.9590.100.1.2.381187369611524586537...	1	
5	1.3.6.1.4.1.9590.100.1.2.153339052913121382622...	1	
6	1.3.6.1.4.1.9590.100.1.2.153339052913121382622...	1	
7	1.3.6.1.4.1.9590.100.1.2.178994714611485132105...	1	
8	1.3.6.1.4.1.9590.100.1.2.178994714611485132105...	1	
9	1.3.6.1.4.1.9590.100.1.2.411833492612373627114...	1	

	SmallestImagePixelValue	SpecificCharacterSet	StudyDate	StudyID	\
0	23078	ISO_IR 100	20160720.0	DDSM	
1	0	ISO_IR 100	20160720.0	DDSM	
2	0	ISO_IR 100	20160807.0	DDSM	
3	32298	ISO_IR 100	20170829.0	DDSM	
4	0	ISO_IR 100	NaN	DDSM	
5	0	ISO_IR 100	20170906.0	DDSM	
6	44323	ISO_IR 100	20170830.0	DDSM	
7	24057	ISO_IR 100	20170830.0	DDSM	
8	0	ISO_IR 100	20170906.0	DDSM	
9	0	ISO_IR 100	20170906.0	DDSM	

	StudyInstanceUID	StudyTime
0	1.3.6.1.4.1.9590.100.1.2.271867287611061855725...	214951.0
1	1.3.6.1.4.1.9590.100.1.2.161516517311681906612...	193426.0
2	1.3.6.1.4.1.9590.100.1.2.291043622711253836701...	161814.0

```

3  1.3.6.1.4.1.9590.100.1.2.335006093711888937440... 180109.0
4  1.3.6.1.4.1.9590.100.1.2.335006093711888937440...      NaN
5  1.3.6.1.4.1.9590.100.1.2.157384031212566921514... 82702.0
6  1.3.6.1.4.1.9590.100.1.2.157384031212566921514... 215032.0
7  1.3.6.1.4.1.9590.100.1.2.250103550412831547020... 215300.0
8  1.3.6.1.4.1.9590.100.1.2.250103550412831547020... 84849.0
9  1.3.6.1.4.1.9590.100.1.2.407544576612957992910... 90204.0

```

[10 rows x 38 columns]

Mass Case Description Test Set

```
[26]: mass_case_desc_test_set.head(10)
```

```

[26]:  patient_id  breast_density left or right breast image view  abnormality id \
0      P_00016           4             LEFT      CC           1
1      P_00016           4             LEFT      MLO          1
2      P_00017           2             LEFT      CC           1
3      P_00017           2             LEFT      MLO          1
4      P_00032           3             RIGHT     CC           1
5      P_00032           3             RIGHT     MLO          1
6      P_00037           3             RIGHT     CC           1
7      P_00037           3             RIGHT     MLO          1
8      P_00056           3             LEFT      MLO          1
9      P_00066           4             LEFT      CC           1

      abnormality type mass shape    mass margins  assessment  pathology  subtlety \
0              mass  IRREGULAR  SPICULATED           5  MALIGNANT           5
1              mass  IRREGULAR  SPICULATED           5  MALIGNANT           5
2              mass    ROUND  CIRCUMSCRIBED           4  MALIGNANT           4
3              mass    ROUND  ILL_DEFINED           4  MALIGNANT           4
4              mass    ROUND    OBSCURED            0    BENIGN           2
5              mass    ROUND    OBSCURED            0    BENIGN           2
6              mass    ROUND  SPICULATED           5  MALIGNANT           5
7              mass  IRREGULAR  SPICULATED           5  MALIGNANT           5
8              mass  LOBULATED  CIRCUMSCRIBED           3    BENIGN           4
9              mass  IRREGULAR  SPICULATED           4  MALIGNANT           3

                                image file path \
0  Mass-Test_P_00016_LEFT_CC/1.3.6.1.4.1.9590.100...
1  Mass-Test_P_00016_LEFT_MLO/1.3.6.1.4.1.9590.10...
2  Mass-Test_P_00017_LEFT_CC/1.3.6.1.4.1.9590.100...
3  Mass-Test_P_00017_LEFT_MLO/1.3.6.1.4.1.9590.10...
4  Mass-Test_P_00032_RIGHT_CC/1.3.6.1.4.1.9590.10...
5  Mass-Test_P_00032_RIGHT_MLO/1.3.6.1.4.1.9590.1...
6  Mass-Test_P_00037_RIGHT_CC/1.3.6.1.4.1.9590.10...
7  Mass-Test_P_00037_RIGHT_MLO/1.3.6.1.4.1.9590.1...

```

```

8 Mass-Test_P_00056_LEFT_MLO/1.3.6.1.4.1.9590.10...
9 Mass-Test_P_00066_LEFT_CC/1.3.6.1.4.1.9590.100...

```

```

                                cropped image file path \
0 Mass-Test_P_00016_LEFT_CC_1/1.3.6.1.4.1.9590.1...
1 Mass-Test_P_00016_LEFT_MLO_1/1.3.6.1.4.1.9590...
2 Mass-Test_P_00017_LEFT_CC_1/1.3.6.1.4.1.9590.1...
3 Mass-Test_P_00017_LEFT_MLO_1/1.3.6.1.4.1.9590...
4 Mass-Test_P_00032_RIGHT_CC_1/1.3.6.1.4.1.9590...
5 Mass-Test_P_00032_RIGHT_MLO_1/1.3.6.1.4.1.9590...
6 Mass-Test_P_00037_RIGHT_CC_1/1.3.6.1.4.1.9590...
7 Mass-Test_P_00037_RIGHT_MLO_1/1.3.6.1.4.1.9590...
8 Mass-Test_P_00056_LEFT_MLO_1/1.3.6.1.4.1.9590...
9 Mass-Test_P_00066_LEFT_CC_1/1.3.6.1.4.1.9590.1...

```

```

                                ROI mask file path
0 Mass-Test_P_00016_LEFT_CC_1/1.3.6.1.4.1.9590.1...
1 Mass-Test_P_00016_LEFT_MLO_1/1.3.6.1.4.1.9590...
2 Mass-Test_P_00017_LEFT_CC_1/1.3.6.1.4.1.9590.1...
3 Mass-Test_P_00017_LEFT_MLO_1/1.3.6.1.4.1.9590...
4 Mass-Test_P_00032_RIGHT_CC_1/1.3.6.1.4.1.9590...
5 Mass-Test_P_00032_RIGHT_MLO_1/1.3.6.1.4.1.9590...
6 Mass-Test_P_00037_RIGHT_CC_1/1.3.6.1.4.1.9590...
7 Mass-Test_P_00037_RIGHT_MLO_1/1.3.6.1.4.1.9590...
8 Mass-Test_P_00056_LEFT_MLO_1/1.3.6.1.4.1.9590...
9 Mass-Test_P_00066_LEFT_CC_1/1.3.6.1.4.1.9590.1...

```

## Mass Case Description Train Set

```
[28]: mass_case_desc_train_set.head(10)
```

```

[28]:  patient_id  breast_density left or right breast image view  abnormality id \
0      P_00001           3             LEFT      CC           1
1      P_00001           3             LEFT      MLO           1
2      P_00004           3             LEFT      CC           1
3      P_00004           3             LEFT      MLO           1
4      P_00004           3             RIGHT     MLO           1
5      P_00009           3             RIGHT     CC           1
6      P_00009           3             RIGHT     MLO           1
7      P_00015           3             LEFT      MLO           1
8      P_00018           2             RIGHT     CC           1
9      P_00018           2             RIGHT     MLO           1

```

```

                                abnormality type          mass shape \
0                                mass  IRREGULAR-ARCHITECTURAL_DISTORTION
1                                mass  IRREGULAR-ARCHITECTURAL_DISTORTION
2                                mass           ARCHITECTURAL_DISTORTION

```

3	mass	ARCHITECTURAL_DISTORTION
4	mass	OVAL
5	mass	OVAL
6	mass	OVAL
7	mass	IRREGULAR
8	mass	OVAL
9	mass	OVAL

	mass margins	assessment	pathology	subtlety \
0	SPICULATED	4	MALIGNANT	4
1	SPICULATED	4	MALIGNANT	4
2	ILL_DEFINED	4	BENIGN	3
3	ILL_DEFINED	4	BENIGN	3
4	CIRCUMSCRIBED	4	BENIGN	5
5	ILL_DEFINED	4	MALIGNANT	4
6	ILL_DEFINED	4	MALIGNANT	4
7	ILL_DEFINED-SPICULATED	4	MALIGNANT	4
8	CIRCUMSCRIBED	4	BENIGN	5
9	CIRCUMSCRIBED	4	BENIGN	5

	image file path \
0	Mass-Training_P_00001_LEFT_CC/1.3.6.1.4.1.9590...
1	Mass-Training_P_00001_LEFT_MLO/1.3.6.1.4.1.959...
2	Mass-Training_P_00004_LEFT_CC/1.3.6.1.4.1.9590...
3	Mass-Training_P_00004_LEFT_MLO/1.3.6.1.4.1.959...
4	Mass-Training_P_00004_RIGHT_MLO/1.3.6.1.4.1.95...
5	Mass-Training_P_00009_RIGHT_CC/1.3.6.1.4.1.959...
6	Mass-Training_P_00009_RIGHT_MLO/1.3.6.1.4.1.95...
7	Mass-Training_P_00015_LEFT_MLO/1.3.6.1.4.1.959...
8	Mass-Training_P_00018_RIGHT_CC/1.3.6.1.4.1.959...
9	Mass-Training_P_00018_RIGHT_MLO/1.3.6.1.4.1.95...

	cropped image file path \
0	Mass-Training_P_00001_LEFT_CC_1/1.3.6.1.4.1.95...
1	Mass-Training_P_00001_LEFT_MLO_1/1.3.6.1.4.1.9...
2	Mass-Training_P_00004_LEFT_CC_1/1.3.6.1.4.1.95...
3	Mass-Training_P_00004_LEFT_MLO_1/1.3.6.1.4.1.9...
4	Mass-Training_P_00004_RIGHT_MLO_1/1.3.6.1.4.1...
5	Mass-Training_P_00009_RIGHT_CC_1/1.3.6.1.4.1.9...
6	Mass-Training_P_00009_RIGHT_MLO_1/1.3.6.1.4.1...
7	Mass-Training_P_00015_LEFT_MLO_1/1.3.6.1.4.1.9...
8	Mass-Training_P_00018_RIGHT_CC_1/1.3.6.1.4.1.9...
9	Mass-Training_P_00018_RIGHT_MLO_1/1.3.6.1.4.1...

	ROI mask file path
0	Mass-Training_P_00001_LEFT_CC_1/1.3.6.1.4.1.95...
1	Mass-Training_P_00001_LEFT_MLO_1/1.3.6.1.4.1.9...



```

2 Mass-Training_P_00004_LEFT_CC_1/1.3.6.1.4.1.95...
3 Mass-Training_P_00004_LEFT_MLO_1/1.3.6.1.4.1.9...
4 Mass-Training_P_00004_RIGHT_MLO_1/1.3.6.1.4.1...
5 Mass-Training_P_00009_RIGHT_CC_1/1.3.6.1.4.1.9...
6 Mass-Training_P_00009_RIGHT_MLO_1/1.3.6.1.4.1...
7 Mass-Training_P_00015_LEFT_MLO_1/1.3.6.1.4.1.9...
8 Mass-Training_P_00018_RIGHT_CC_1/1.3.6.1.4.1.9...
9 Mass-Training_P_00018_RIGHT_MLO_1/1.3.6.1.4.1...

```

## Meta Information

```
[30]: meta.head(10)
```

```

[30]:                                     SeriesInstanceUID \
0  1.3.6.1.4.1.9590.100.1.2.117041576511324414842...
1  1.3.6.1.4.1.9590.100.1.2.438738396107617880132...
2  1.3.6.1.4.1.9590.100.1.2.767416741131676463382...
3  1.3.6.1.4.1.9590.100.1.2.296931352612305599800...
4  1.3.6.1.4.1.9590.100.1.2.436657670120353100077...
5  1.3.6.1.4.1.9590.100.1.2.245633900110007082034...
6  1.3.6.1.4.1.9590.100.1.2.451316277131445824242...
7  1.3.6.1.4.1.9590.100.1.2.321062807811123845106...
8  1.3.6.1.4.1.9590.100.1.2.203989029910964209440...
9  1.3.6.1.4.1.9590.100.1.2.593316452127229649195...

```

```

                                     StudyInstanceUID Modality \
0  1.3.6.1.4.1.9590.100.1.2.229361142710768138411...    MG
1  1.3.6.1.4.1.9590.100.1.2.195593486612988388325...    MG
2  1.3.6.1.4.1.9590.100.1.2.257901172612530623323...    MG
3  1.3.6.1.4.1.9590.100.1.2.109468616710242115222...    MG
4  1.3.6.1.4.1.9590.100.1.2.380627129513562450304...    MG
5  1.3.6.1.4.1.9590.100.1.2.143790815011189157220...    MG
6  1.3.6.1.4.1.9590.100.1.2.310228111811303452111...    MG
7  1.3.6.1.4.1.9590.100.1.2.195655760513031195523...    MG
8  1.3.6.1.4.1.9590.100.1.2.222512969612930058132...    MG
9  1.3.6.1.4.1.9590.100.1.2.407538725111828839342...    MG

```

```

SeriesDescription BodyPartExamined SeriesNumber Collection Visibility \
0  ROI mask images          BREAST              1  CBIS-DDSM          1
1  ROI mask images          BREAST              1  CBIS-DDSM          1
2  ROI mask images          BREAST              1  CBIS-DDSM          1
3  ROI mask images          BREAST              1  CBIS-DDSM          1
4  ROI mask images          BREAST              1  CBIS-DDSM          1
5  ROI mask images          BREAST              1  CBIS-DDSM          1
6  ROI mask images          BREAST              1  CBIS-DDSM          1
7  cropped images          BREAST              1  CBIS-DDSM          1
8  ROI mask images          BREAST              1  CBIS-DDSM          1

```

9	ROI mask images	BREAST	1	CBIS-DDSM	1
---	-----------------	--------	---	-----------	---

	ImageCount
0	2
1	2
2	2
3	2
4	2
5	2
6	2
7	1
8	1
9	2