

PI Summit Figures

Brandon D. Gallas

5/5/2021

This file produces the figures presented at Pathology Informatics, 6 May 2021. There are minor differences compared to the actual presentation as annotations and pathologist information were being collected continuously.

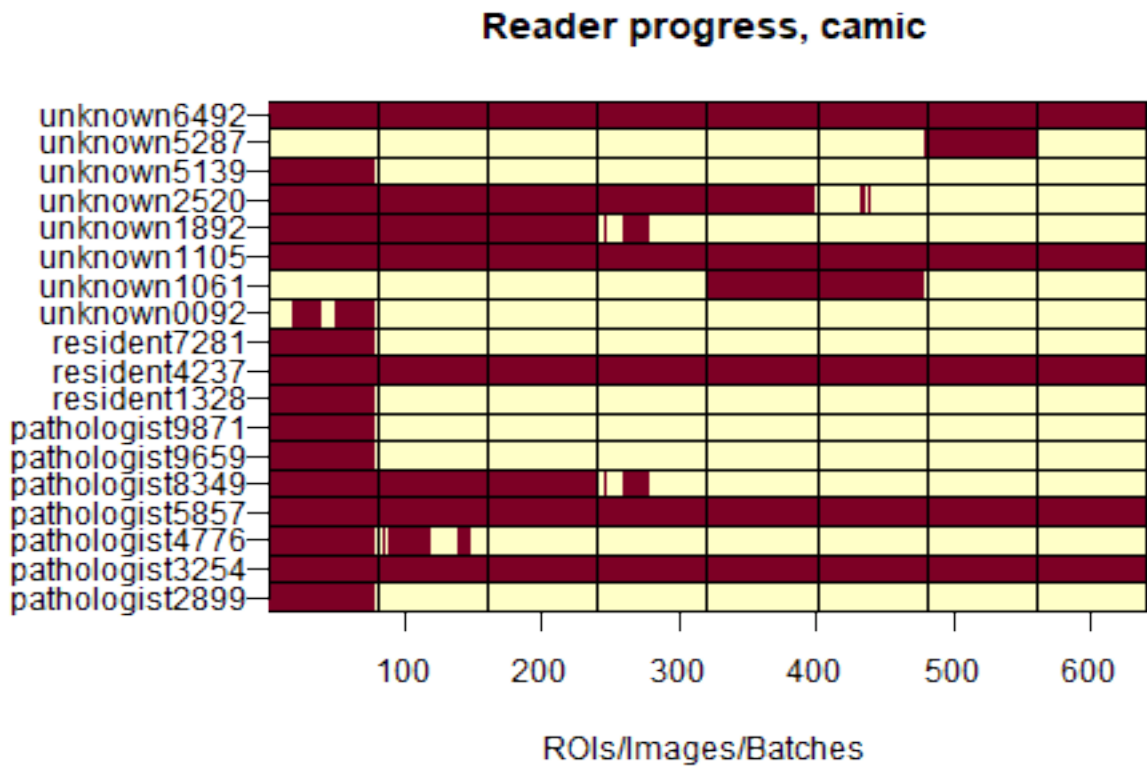
Furthermore, in the “Scatter plot” sections, the grouping of scores into bins based on the mean sTIL density has changed. For the Pathology Informatics talk, it was determined from all the readers using the caMicroscope platform. Now, the bins are determined in two ways: from all the data and from the panel.

Data collected total

Data collection progress

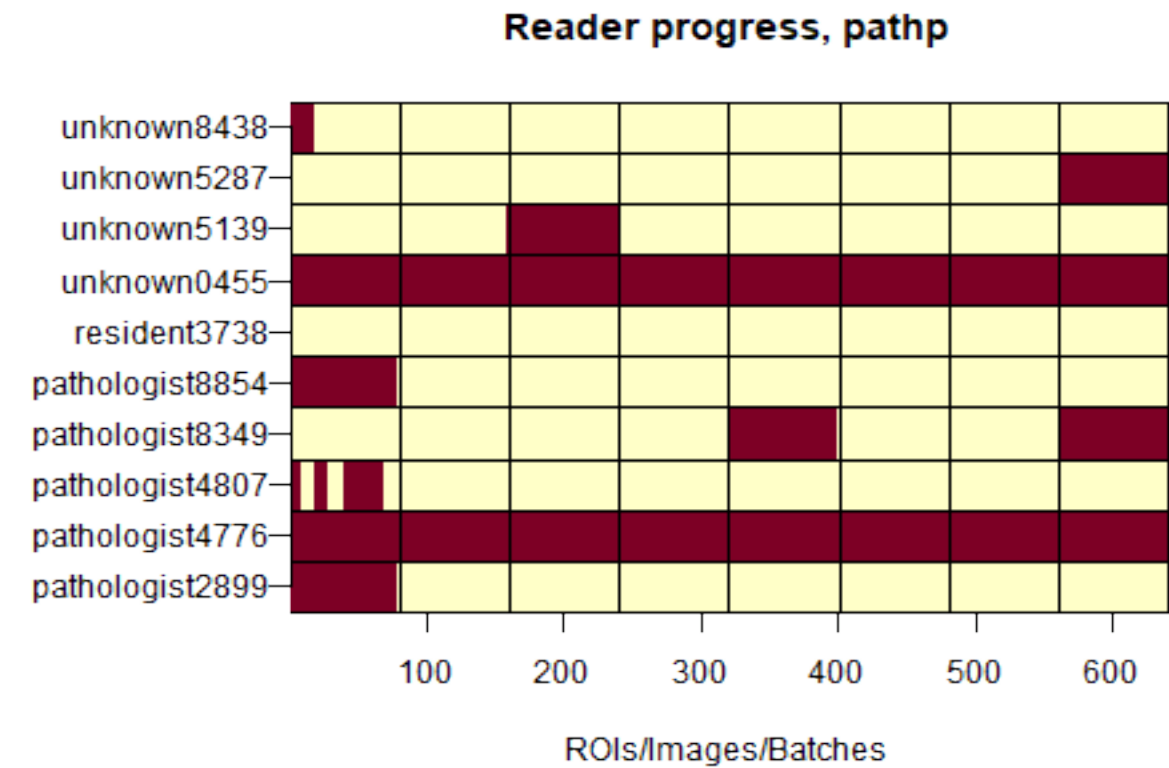
- Date: 2021-05-05 00:00:00 EST
- Across all platforms
 - Total number of observations 7292
 - Total number of readers = 35

Data collected caMicroscope



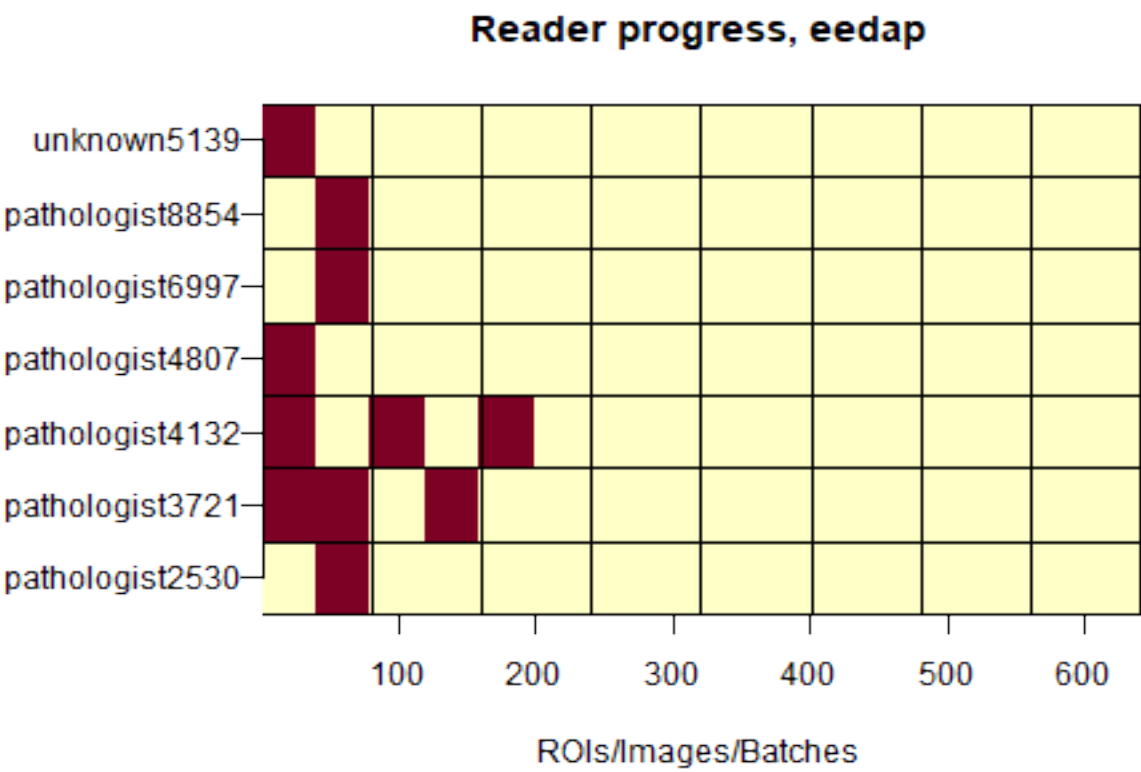
```
## [1] "Total number of observations 5019"
## [1] "Total number of readers 18"
## [1] "Total number of completed batches 61"
## batch001 batch002 batch003 batch004 batch005 batch006 batch007 batch008
##      15      8      8      6      7      6      6      5
```

Data collected PathPresenter



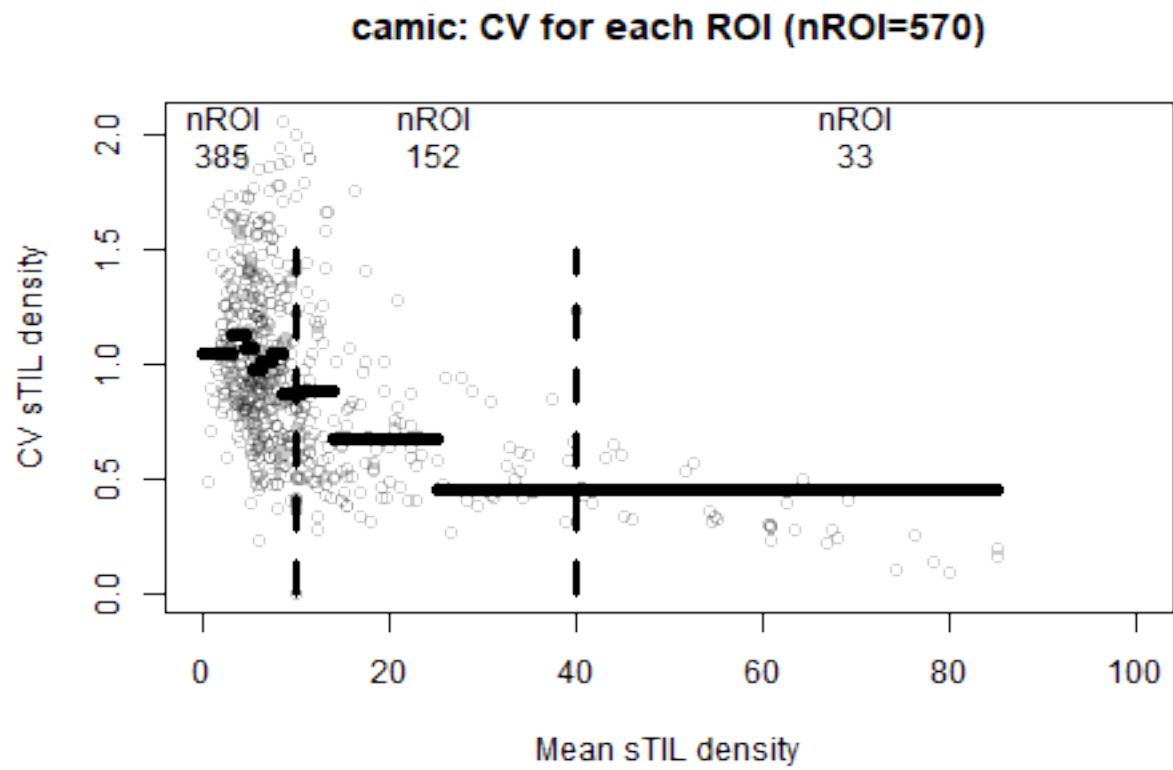
```
## [1] "Total number of observations 1833"
## [1] "Total number of readers 10"
## [1] "Total number of completed batches 22"
## batch001 batch002 batch003 batch004 batch005 batch006 batch007 batch008
##      4      2      3      2      3      2      2      4
```

Data collected eeDAP

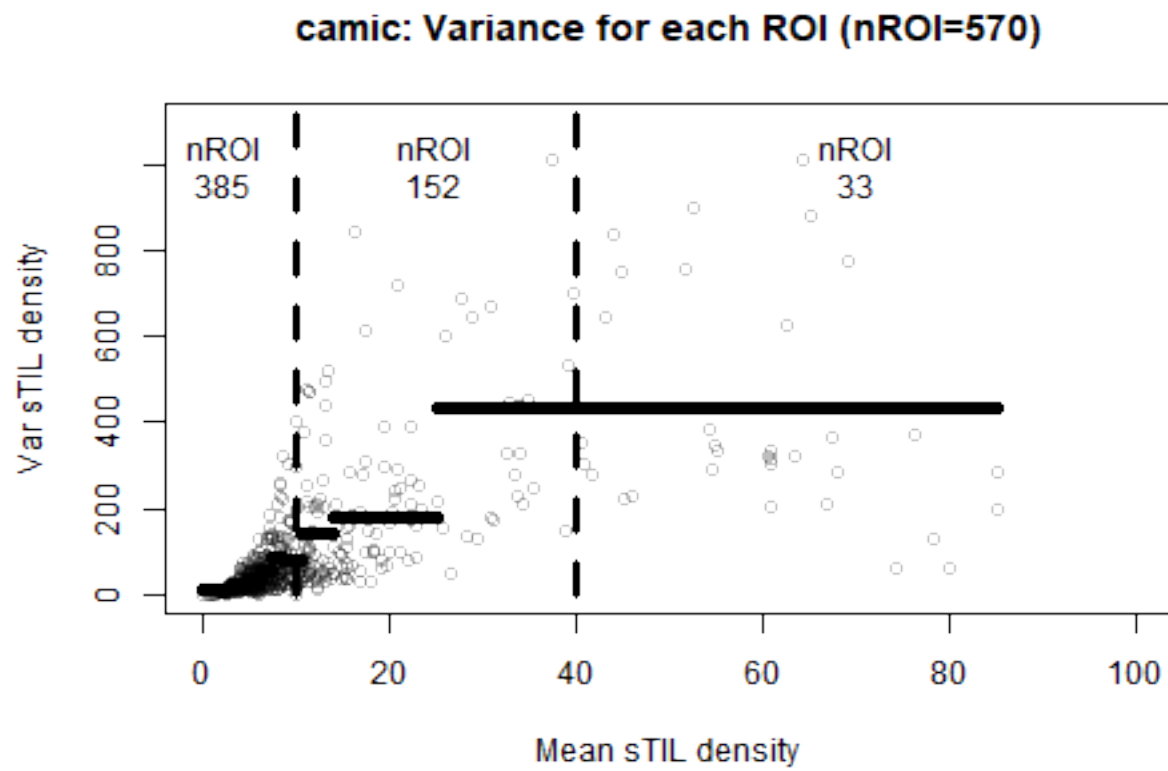


```
## [1] "Total number of observations 440"
## [1] "Total number of readers 7"
## [1] "Total number of completed batches 1"
## batch001 batch002 batch003 batch004 batch005 batch006 batch007 batch008
##      1      0      0      0      0      0      0      0
```

Coefficient of Variation

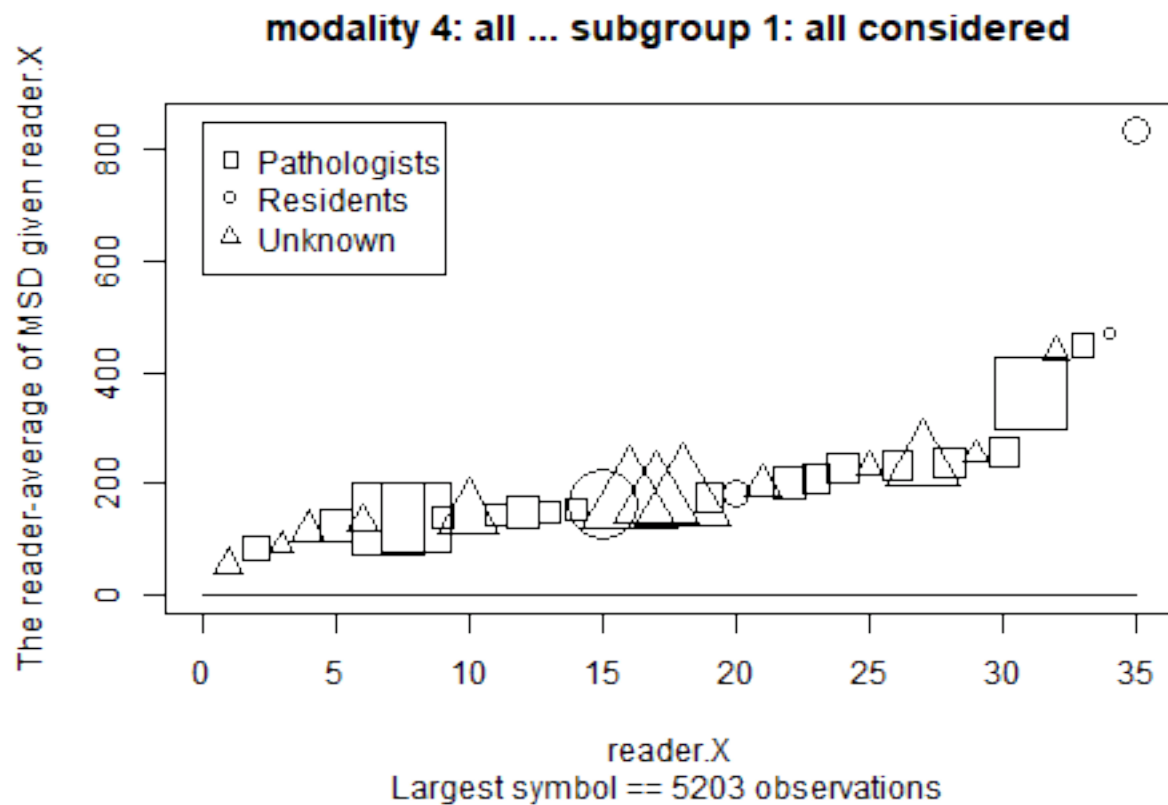


Mean-Variance Relationship



Mean-Squared Deviation Per Reader

All readers, all modalities, All data

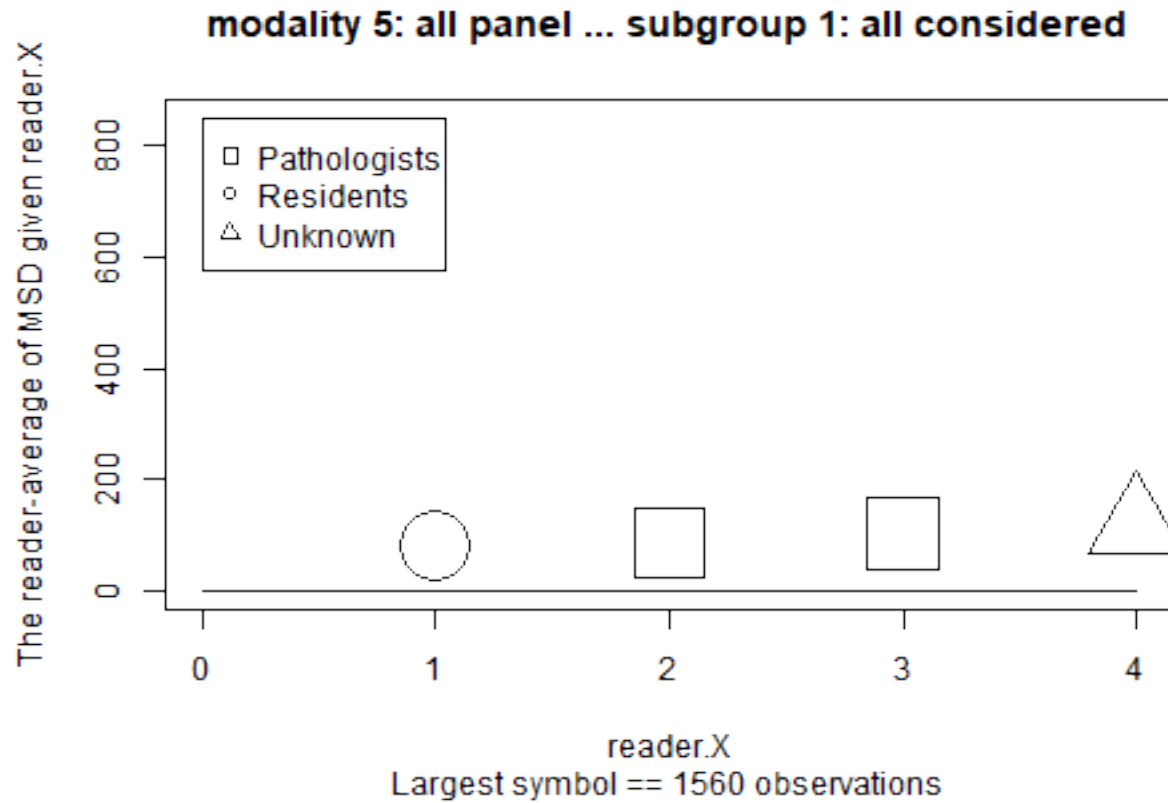


##	readerID	MSD	nObs	nObs.scaled	pch
## 1	unknown5139.pathp	54.57911	594	1.455978	2
## 2	pathologist8349.pathp	83.68956	1062	1.815840	0
## 3	unknown5287.pathp	88.06446	423	1.324491	2
## 4	unknown1061.camic	115.70052	1046	1.803537	2
## 5	pathologist8349.camic	125.73437	1602	2.231065	0
## 6	unknown0092.camic	129.08447	836	1.642061	2
## 7	pathologist4776.pathp	136.48623	5203	5.000000	0
## 8	pathologist5857.camic	137.33259	4986	4.833141	0
## 9	pathologist4807.eedap	138.69640	607	1.465975	0
## 10	unknown1892.camic	144.60038	2858	3.196847	2
## 11	pathologist8854.eedap	145.08547	651	1.499808	0
## 12	pathologist4776.camic	147.77520	1693	2.301038	0
## 13	pathologist6997.eedap	148.06823	675	1.518262	0
## 14	pathologist2530.eedap	153.78831	678	1.520569	0
## 15	resident4237.camic	163.11369	5145	4.955402	1
## 16	unknown1105.camic	170.21969	5091	4.913879	2
## 17	unknown0455.pathp	173.84150	4326	4.325644	2
## 18	unknown6492.camic	173.97651	5112	4.930027	2
## 19	pathologist8854.pathp	174.69089	1297	1.996540	0
## 20	resident7281.camic	182.16052	1300	1.998847	1
## 21	unknown5139.camic	196.64897	1258	1.966551	2

##	22	pathologist3721.eedap	202.52547	1650	2.267974	0
##	23	pathologist9871.camic	209.64893	1341	2.030373	0
##	24	pathologist9659.camic	229.66851	1362	2.046521	0
##	25	unknown5139.eedap	230.13821	647	1.496732	2
##	26	pathologist2899.pathp	231.57715	1340	2.029604	0
##	27	unknown2520.camic	237.17638	3851	3.960400	2
##	28	pathologist4132.eedap	238.67727	1415	2.087274	0
##	29	unknown8438.pathp	250.58951	393	1.301423	2
##	30	pathologist2899.camic	255.52480	1340	2.029604	0
##	31	pathologist3254.camic	360.38973	5180	4.982314	0
##	32	unknown5287.camic	436.75276	495	1.379854	2
##	33	pathologist4807.pathp	447.74720	767	1.589004	0
##	34	resident3738.pathp	471.90000	10	1.006920	1
##	35	resident1328.camic	831.47050	1344	2.032680	1

Mean-Squared Deviation Per Reader

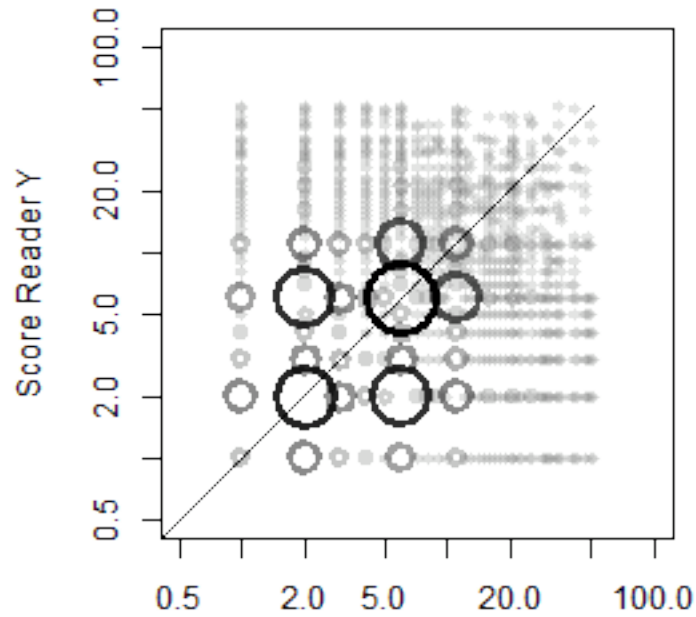
PANEL, all modalities, All data



##	readerID	MSD	nObs	nObs.scaled	pch
## 1	resident4237.camic	80.31676	1549	4.971777	1
## 2	pathologist5857.camic	84.82570	1514	4.881976	0
## 3	pathologist4776.pathp	102.80696	1560	5.000000	0
## 4	unknown1105.camic	115.64657	1523	4.905067	2

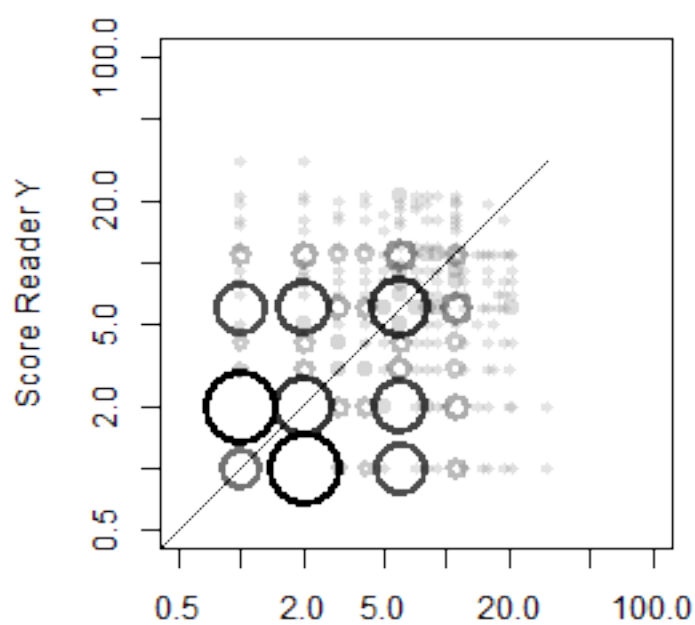
Scatter plot: Average Score ≤ 10

Modality 4: all ... Subgroup 2: avg. less than or equal to 10



```
##          meanDiff var.MeanDiff var.1obs ci95meanDiff.bot ci95meanDiff.top
## AminusB          0           0 74.73736                0                0
##          la.bot   la.top
## AminusB -17.29015 17.29015
```

Modality 5: all panel ... Subgroup 2: avg. less than or equal to 10

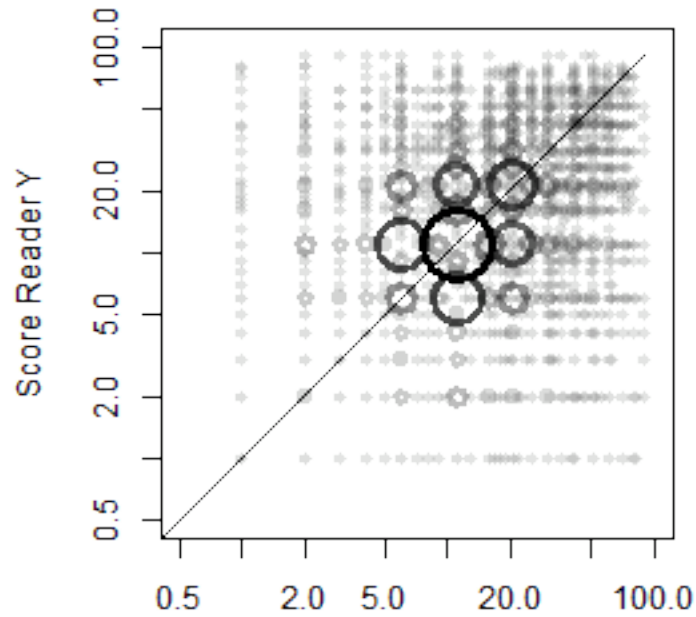


Score Reader X
n = 4832 , Largest symbol == 351 observations

```
##          meanDiff var.MeanDiff var.1obs ci95meanDiff.bot ci95meanDiff.top
## AminusB          0           0 25.60012                0                0
##          la.bot   la.top
## AminusB -10.11931 10.11931
```

Scatter plot: $10 < \text{Average Score} \leq 40$

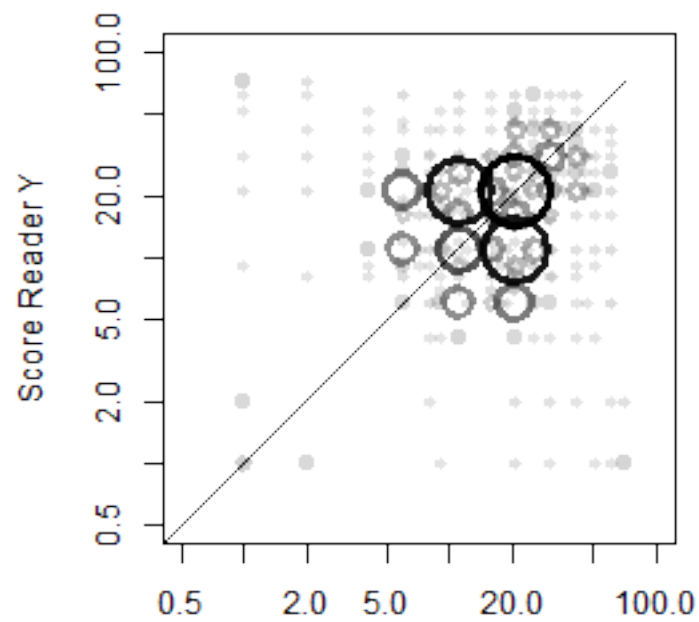
dality 4: all ... Subgroup 3: avg. greater than 10 and less than or equ



Score Reader X
n = 17114 , Largest symbol == 792 observations

```
##          meanDiff var.MeanDiff var.1obs ci95meanDiff.bot ci95meanDiff.top
## AminusB          0           0 396.8219                0                0
##          la.bot   la.top
## AminusB -39.84078 39.84078
```

ity 5: all panel ... Subgroup 3: avg. greater than 10 and less than or e

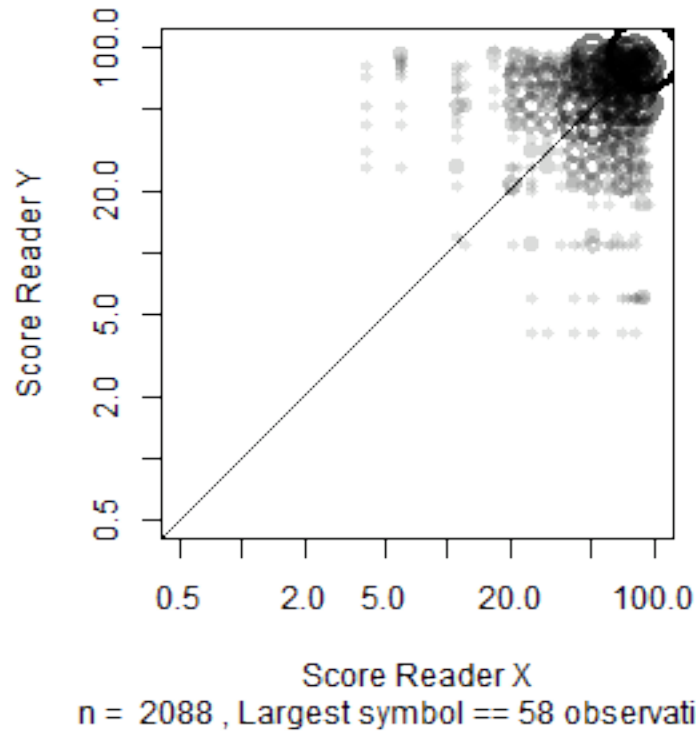


Score Reader X
n = 1014 , Largest symbol == 62 observations

```
##          meanDiff var.MeanDiff var.1obs ci95meanDiff.bot ci95meanDiff.top
## AminusB          0           0 317.8862                0                0
##          la.bot   la.top
## AminusB -35.65873 35.65873
```

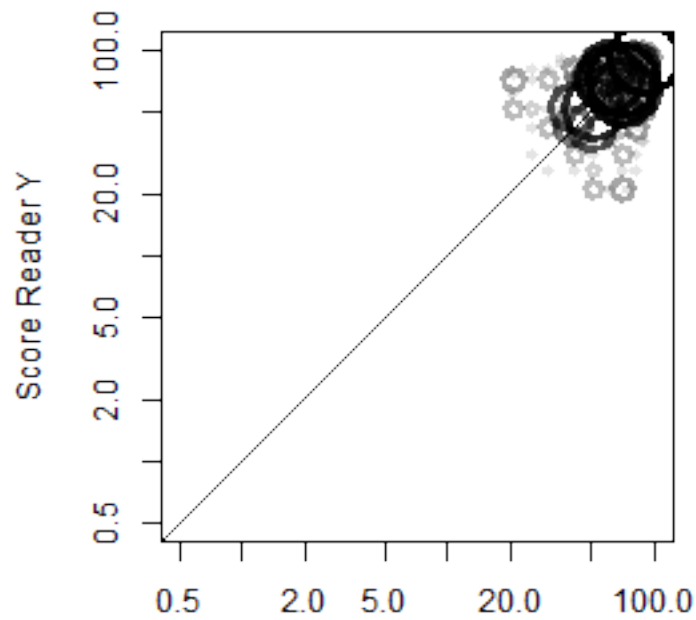
Scatter plot: Average Score > 40

Modality 4: all ... Subgroup 4: avg. greater than 40



```
##          meanDiff var.MeanDiff var.1obs ci95meanDiff.bot ci95meanDiff.top
## AminusB          0           0 1103.517                0                0
##          la.bot   la.top
## AminusB -66.43845 66.43845
```

Modality 5: all panel ... Subgroup 4: avg. greater than 40



Score Reader X
n = 300 , Largest symbol == 12 observations

```
##          meanDiff var.MeanDiff var.1obs ci95meanDiff.bot ci95meanDiff.top
## AminusB          0           0 846.4883              0              0
##          la.bot   la.top
## AminusB -58.18894 58.18894
```