For each spreadsheet, can you please e-mail me: (1) the statistical results; (2) the AFROC plot with tabulated values; (3) the ROC plot with tabulated values?

# Code

#MainAnalyzeData.R

rm(list = ls())

library(RJafroc)

## First dataset

###fileName <- "./Datasets/RayAndrewPerCase.xlsx"

## May Dataset

#fileName <- "./Datasets/RA\_Lesion\_Ca\_OP.xlsx"

#fileName <- "./Datasets/RA\_Lesion\_Bx\_OP.xlsx"

#fileName <- "./Datasets/RA\_Lesion\_Ca\_Certainty.xlsx"

fileName <- "./Datasets/RA\_Lesion\_Bx\_Certainty.xlsx"

frocData <- ReadDataFile(fileName)

# wAFROC analysis

ResultsFroc <- ORHAnalysis(frocData, fom = "wJAFROC", alpha = 0.05,

covEstMethod = "Jackknife", option = "FRRC")

EmpiricalOpCharac(frocData, trts = c(1,2), rdrs = 1, opChType = "wAFROC")

# inferred ROC analysis

rocData <- FROC2HrROC(frocData)

ResultsRoc <- ORHAnalysis(rocData, fom = "Wilcoxon", alpha = 0.05,

covEstMethod = "Jackknife", option = "FRRC")

EmpiricalOpCharac(rocData, trts = c(1,2), rdrs = 1, opChType = "ROC")

# Dataset RA\_Lesion\_Ca\_OP

## FROC ANALYSIS

### Results

$fomArray

Rdr - 1

Trt - 1 0.5997732

Trt - 2 0.6615646

$msT

[1] 0.001909088

$msTR

[1] NaN

$varComp

varCov

Var(R) NaN

Var(T\*R) NaN

COV1 0.0008438733

COV2 NaN

COV3 NaN

Var(Error) 0.0017033509

$fFRRC

[1] 2.221218

$ddfFRRC

[1] Inf

$pFRRC

[1] 0.1361256

$ciDiffTrtFRRC

Treatment Estimate StdErr DF t Pr > t CI Lower CI Upper

1 1 - 2 -0.06179138 0.04146029 Inf -1.490375 0.1361256 -0.1430521 0.01946929

$ciAvgRdrEachTrtFRRC

Treatment Area StdErr DF CI Lower CI Upper

1 1 0.5997732 0.03982616 Inf 0.5217154 0.6778311

2 2 0.6615646 0.04266824 Inf 0.5779364 0.7451928

$ciDiffTrtEachRdr

Reader Treatment Estimate StdErr DF t Pr > t CI Lower CI Upper

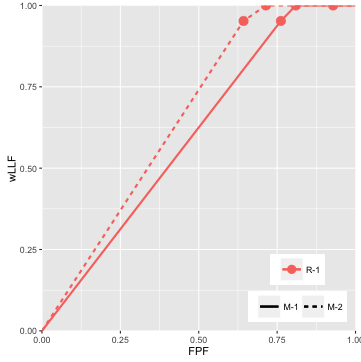
1 1 1 - 2 -0.06179138 0.04146029 Inf -1.490375 0.1361256 -0.1430521 0.01946929

$varCovEachRdr

Reader Var Cov1

1 1 0.001703351 0.0008438733

### wAfroc Plot



### wAfroc Data Points

FPF wLLF class type

1 0.0000000 0.000000 M-1\nR-1 individual

2 0.7619048 0.952381 M-1\nR-1 individual

3 0.8095238 1.000000 M-1\nR-1 individual

4 0.9285714 1.000000 M-1\nR-1 individual

5 1.0000000 1.000000 M-1\nR-1 individual

6 0.0000000 0.000000 M-2\nR-1 individual

7 0.6428571 0.952381 M-2\nR-1 individual

8 0.7142857 1.000000 M-2\nR-1 individual

9 1.0000000 1.000000 M-2\nR-1 individual

## ROC ANALYSIS

### Results

$fomArray

Rdr - 1

Trt - 1 0.6190476

Trt - 2 0.6785714

$msT

[1] 0.001771542

$msTR

[1] NaN

$varComp

varCov

Var(R) NaN

Var(T\*R) NaN

COV1 0.0007945276

COV2 NaN

COV3 NaN

Var(Error) 0.0012632292

$fFRRC

[1] 3.77968

$ddfFRRC

[1] Inf

$pFRRC

[1] 0.05187859

$ciDiffTrtFRRC

Treatment Estimate StdErr DF t Pr > t CI Lower CI Upper

1 1 - 2 -0.05952381 0.03061704 Inf -1.94414 0.05187859 -0.1195321 0.0004844877

$ciAvgRdrEachTrtFRRC

Treatment Area StdErr DF CI Lower CI Upper

1 1 0.6190476 0.03339351 Inf 0.5535975 0.6844977

2 2 0.6785714 0.03756770 Inf 0.6049401 0.7522028

$ciDiffTrtEachRdr

Reader Treatment Estimate StdErr DF t Pr > t CI Lower CI Upper

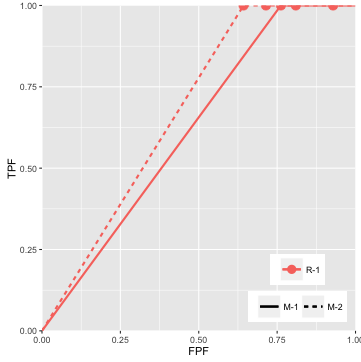
1 1 1 - 2 -0.05952381 0.03061704 Inf -1.94414 0.05187859 -0.1195321 0.0004844877

$varCovEachRdr

Reader Var Cov1

1 1 0.001263229 0.0007945276

### roc Plot



### roc Data Points

FPF TPF class type

1 0.0000000 0 M-1\nR-1 individual

2 0.7619048 1 M-1\nR-1 individual

3 0.8095238 1 M-1\nR-1 individual

4 0.9285714 1 M-1\nR-1 individual

5 1.0000000 1 M-1\nR-1 individual

6 0.0000000 0 M-2\nR-1 individual

7 0.6428571 1 M-2\nR-1 individual

8 0.7142857 1 M-2\nR-1 individual

9 1.0000000 1 M-2\nR-1 individua

# Dataset RA\_Lesion\_Bx\_OP

## FROC ANALYSIS

### Results

$fomArray

Rdr - 1

Trt - 1 0.6921769

Trt - 2 0.7698413

$msT

[1] 0.003015879

$msTR

[1] NaN

$varComp

varCov

Var(R) NaN

Var(T\*R) NaN

COV1 0.002286719

COV2 NaN

COV3 NaN

Var(Error) 0.003688929

$fFRRC

[1] 2.150805

$ddfFRRC

[1] Inf

$pFRRC

[1] 0.1424952

$ciDiffTrtFRRC

Treatment Estimate StdErr DF t Pr > t CI Lower CI Upper

1 1 - 2 -0.0776644 0.05295677 Inf -1.466562 0.1424952 -0.1814578 0.02612897

$ciAvgRdrEachTrtFRRC

Treatment Area StdErr DF CI Lower CI Upper

1 1 0.6921769 0.06112885 Inf 0.5723665 0.8119872

2 2 0.7698413 0.06034170 Inf 0.6515737 0.8881088

$ciDiffTrtEachRdr

Reader Treatment Estimate StdErr DF t Pr > t CI Lower CI Upper

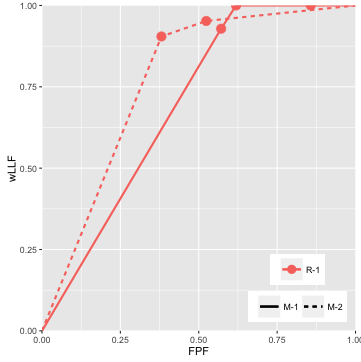
1 1 1 - 2 -0.0776644 0.05295677 Inf -1.466562 0.1424952 -0.1814578 0.02612897

$varCovEachRdr

Reader Var Cov1

1 1 0.003688929 0.002286719

### wAfroc Plot



### wAfroc Data Points

FPF wLLF class type

1 0.0000000 0.0000000 M-1\nR-1 individual

2 0.5714286 0.9285714 M-1\nR-1 individual

3 0.6190476 1.0000000 M-1\nR-1 individual

4 0.8571429 1.0000000 M-1\nR-1 individual

5 1.0000000 1.0000000 M-1\nR-1 individual

6 0.0000000 0.0000000 M-2\nR-1 individual

7 0.3809524 0.9047619 M-2\nR-1 individual

8 0.5238095 0.9523810 M-2\nR-1 individual

9 1.0000000 1.0000000 M-2\nR-1 individual

## ROC ANALYSIS

### Results

$fomArray

Rdr - 1

Trt - 1 0.7069161

Trt - 2 0.7823129

$msT

[1] 0.002842341

$msTR

[1] NaN

$varComp

varCov

Var(R) NaN

Var(T\*R) NaN

COV1 0.002127723

COV2 NaN

COV3 NaN

Var(Error) 0.003350255

$fFRRC

[1] 2.324963

$ddfFRRC

[1] Inf

$pFRRC

[1] 0.1273133

$ciDiffTrtFRRC

Treatment Estimate StdErr DF t Pr > t CI Lower CI Upper

1 1 - 2 -0.07539683 0.04944758 Inf -1.524783 0.1273133 -0.1723123 0.02151865

$ciAvgRdrEachTrtFRRC

Treatment Area StdErr DF CI Lower CI Upper

1 1 0.7069161 0.05791062 Inf 0.5934134 0.8204188

2 2 0.7823129 0.05785213 Inf 0.6689248 0.8957010

$ciDiffTrtEachRdr

Reader Treatment Estimate StdErr DF t Pr > t CI Lower CI Upper

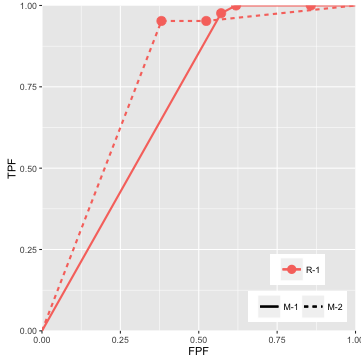
1 1 1 - 2 -0.07539683 0.04944758 Inf -1.524783 0.1273133 -0.1723123 0.02151865

$varCovEachRdr

Reader Var Cov1

1 1 0.003350255 0.002127723

### roc Plot



### roc Data Points

FPF TPF class type

1 0.0000000 0.0000000 M-1\nR-1 individual

2 0.5714286 0.9761905 M-1\nR-1 individual

3 0.6190476 1.0000000 M-1\nR-1 individual

4 0.8571429 1.0000000 M-1\nR-1 individual

5 1.0000000 1.0000000 M-1\nR-1 individual

6 0.0000000 0.0000000 M-2\nR-1 individual

7 0.3809524 0.9523810 M-2\nR-1 individual

8 0.5238095 0.9523810 M-2\nR-1 individual

9 1.0000000 1.0000000 M-2\nR-1 individual

# Dataset RA\_Lesion\_Ca\_Certainty

## FROC ANALYSIS

### Results

$fomArray

Rdr - 1

Trt - 1 0.5272109

Trt - 2 0.6955782

$msT

[1] 0.01417378

$msTR

[1] NaN

$varComp

varCov

Var(R) NaN

Var(T\*R) NaN

COV1 0.002793697

COV2 NaN

COV3 NaN

Var(Error) 0.004932158

$fFRRC

[1] 6.628027

$ddfFRRC

[1] Inf

$pFRRC

[1] 0.01003864

$ciDiffTrtFRRC

Treatment Estimate StdErr DF t Pr > t CI Lower CI Upper

1 1 - 2 -0.1683673 0.06539819 Inf -2.574495 0.01003864 -0.2965454 -0.04018925

$ciAvgRdrEachTrtFRRC

Treatment Area StdErr DF CI Lower CI Upper

1 1 0.5272109 0.07401322 Inf 0.3821476 0.6722741

2 2 0.6955782 0.06622960 Inf 0.5657706 0.8253859

$ciDiffTrtEachRdr

Reader Treatment Estimate StdErr DF t Pr > t CI Lower CI Upper

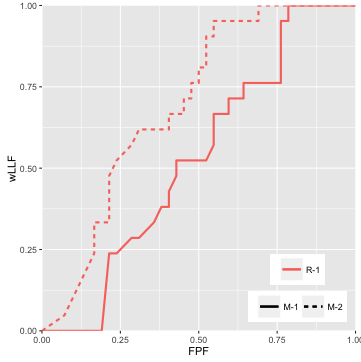
1 1 1 - 2 -0.1683673 0.06539819 Inf -2.574495 0.01003864 -0.2965454 -0.04018925

$varCovEachRdr

Reader Var Cov1

1 1 0.004932158 0.002793697

### wAfroc Plot



### wAfroc Data Points

FPF wLLF class type

1 0.00000000 0.00000000 M-1\nR-1 continuous

2 0.07142857 0.00000000 M-1\nR-1 continuous

3 0.19047619 0.00000000 M-1\nR-1 continuous

4 0.21428571 0.23809524 M-1\nR-1 continuous

5 0.23809524 0.23809524 M-1\nR-1 continuous

6 0.28571429 0.28571429 M-1\nR-1 continuous

7 0.30952381 0.28571429 M-1\nR-1 continuous

8 0.35714286 0.33333333 M-1\nR-1 continuous

9 0.38095238 0.38095238 M-1\nR-1 continuous

10 0.40476190 0.38095238 M-1\nR-1 continuous

11 0.40476190 0.42857143 M-1\nR-1 continuous

12 0.42857143 0.47619048 M-1\nR-1 continuous

13 0.42857143 0.52380952 M-1\nR-1 continuous

14 0.45238095 0.52380952 M-1\nR-1 continuous

15 0.47619048 0.52380952 M-1\nR-1 continuous

16 0.52380952 0.52380952 M-1\nR-1 continuous

17 0.54761905 0.57142857 M-1\nR-1 continuous

18 0.54761905 0.61904762 M-1\nR-1 continuous

19 0.54761905 0.66666667 M-1\nR-1 continuous

20 0.57142857 0.66666667 M-1\nR-1 continuous

21 0.59523810 0.66666667 M-1\nR-1 continuous

22 0.59523810 0.71428571 M-1\nR-1 continuous

23 0.61904762 0.71428571 M-1\nR-1 continuous

24 0.64285714 0.71428571 M-1\nR-1 continuous

25 0.64285714 0.76190476 M-1\nR-1 continuous

26 0.66666667 0.76190476 M-1\nR-1 continuous

27 0.69047619 0.76190476 M-1\nR-1 continuous

28 0.71428571 0.76190476 M-1\nR-1 continuous

29 0.73809524 0.76190476 M-1\nR-1 continuous

30 0.76190476 0.76190476 M-1\nR-1 continuous

31 0.76190476 0.80952381 M-1\nR-1 continuous

32 0.76190476 0.85714286 M-1\nR-1 continuous

33 0.76190476 0.90476190 M-1\nR-1 continuous

34 0.76190476 0.95238095 M-1\nR-1 continuous

35 0.78571429 0.95238095 M-1\nR-1 continuous

36 0.78571429 1.00000000 M-1\nR-1 continuous

37 0.80952381 1.00000000 M-1\nR-1 continuous

38 0.83333333 1.00000000 M-1\nR-1 continuous

39 0.85714286 1.00000000 M-1\nR-1 continuous

40 0.88095238 1.00000000 M-1\nR-1 continuous

41 0.92857143 1.00000000 M-1\nR-1 continuous

42 1.00000000 1.00000000 M-1\nR-1 continuous

43 0.00000000 0.00000000 M-2\nR-1 continuous

44 0.07142857 0.04761905 M-2\nR-1 continuous

45 0.16666667 0.23809524 M-2\nR-1 continuous

46 0.16666667 0.33333333 M-2\nR-1 continuous

47 0.21428571 0.33333333 M-2\nR-1 continuous

48 0.21428571 0.38095238 M-2\nR-1 continuous

49 0.21428571 0.42857143 M-2\nR-1 continuous

50 0.21428571 0.47619048 M-2\nR-1 continuous

51 0.23809524 0.52380952 M-2\nR-1 continuous

52 0.28571429 0.57142857 M-2\nR-1 continuous

53 0.30952381 0.61904762 M-2\nR-1 continuous

54 0.35714286 0.61904762 M-2\nR-1 continuous

55 0.38095238 0.61904762 M-2\nR-1 continuous

56 0.40476190 0.61904762 M-2\nR-1 continuous

57 0.40476190 0.66666667 M-2\nR-1 continuous

58 0.42857143 0.66666667 M-2\nR-1 continuous

59 0.45238095 0.66666667 M-2\nR-1 continuous

60 0.45238095 0.71428571 M-2\nR-1 continuous

61 0.47619048 0.71428571 M-2\nR-1 continuous

62 0.47619048 0.76190476 M-2\nR-1 continuous

63 0.50000000 0.76190476 M-2\nR-1 continuous

64 0.50000000 0.80952381 M-2\nR-1 continuous

65 0.52380952 0.80952381 M-2\nR-1 continuous

66 0.52380952 0.85714286 M-2\nR-1 continuous

67 0.52380952 0.90476190 M-2\nR-1 continuous

68 0.54761905 0.90476190 M-2\nR-1 continuous

69 0.54761905 0.95238095 M-2\nR-1 continuous

70 0.59523810 0.95238095 M-2\nR-1 continuous

71 0.61904762 0.95238095 M-2\nR-1 continuous

72 0.64285714 0.95238095 M-2\nR-1 continuous

73 0.66666667 0.95238095 M-2\nR-1 continuous

74 0.69047619 0.95238095 M-2\nR-1 continuous

75 0.69047619 1.00000000 M-2\nR-1 continuous

76 0.71428571 1.00000000 M-2\nR-1 continuous

77 1.00000000 1.00000000 M-2\nR-1 continuous

## ROC ANALYSIS

### Results

$fomArray

Rdr - 1

Trt - 1 0.5419501

Trt - 2 0.7057823

$msT

[1] 0.01342049

$msTR

[1] NaN

$varComp

varCov

Var(R) NaN

Var(T\*R) NaN

COV1 0.002682231

COV2 NaN

COV3 NaN

Var(Error) 0.004788171

$fFRRC

[1] 6.372688

$ddfFRRC

[1] Inf

$pFRRC

[1] 0.01158899

$ciDiffTrtFRRC

Treatment Estimate StdErr DF t Pr > t CI Lower CI Upper

1 1 - 2 -0.1638322 0.06489899 Inf -2.524418 0.01158899 -0.2910319 -0.03663251

$ciAvgRdrEachTrtFRRC

Treatment Area StdErr DF CI Lower CI Upper

1 1 0.5419501 0.07308174 Inf 0.3987125 0.6851877

2 2 0.7057823 0.06507996 Inf 0.5782279 0.8333367

$ciDiffTrtEachRdr

Reader Treatment Estimate StdErr DF t Pr > t CI Lower CI Upper

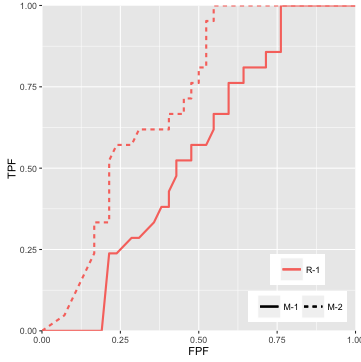
1 1 1 - 2 -0.1638322 0.06489899 Inf -2.524418 0.01158899 -0.2910319 -0.03663251

$varCovEachRdr

Reader Var Cov1

1 1 0.004788171 0.002682231

### roc Plot



### roc Data Points

FPF TPF class type

1 0.00000000 0.00000000 M-1\nR-1 continuous

2 0.07142857 0.00000000 M-1\nR-1 continuous

3 0.19047619 0.00000000 M-1\nR-1 continuous

4 0.21428571 0.23809524 M-1\nR-1 continuous

5 0.23809524 0.23809524 M-1\nR-1 continuous

6 0.28571429 0.28571429 M-1\nR-1 continuous

7 0.30952381 0.28571429 M-1\nR-1 continuous

8 0.35714286 0.33333333 M-1\nR-1 continuous

9 0.38095238 0.38095238 M-1\nR-1 continuous

10 0.40476190 0.38095238 M-1\nR-1 continuous

11 0.40476190 0.42857143 M-1\nR-1 continuous

12 0.42857143 0.47619048 M-1\nR-1 continuous

13 0.42857143 0.52380952 M-1\nR-1 continuous

14 0.45238095 0.52380952 M-1\nR-1 continuous

15 0.47619048 0.52380952 M-1\nR-1 continuous

16 0.47619048 0.57142857 M-1\nR-1 continuous

17 0.52380952 0.57142857 M-1\nR-1 continuous

18 0.54761905 0.61904762 M-1\nR-1 continuous

19 0.54761905 0.66666667 M-1\nR-1 continuous

20 0.57142857 0.66666667 M-1\nR-1 continuous

21 0.59523810 0.66666667 M-1\nR-1 continuous

22 0.59523810 0.71428571 M-1\nR-1 continuous

23 0.59523810 0.76190476 M-1\nR-1 continuous

24 0.61904762 0.76190476 M-1\nR-1 continuous

25 0.64285714 0.76190476 M-1\nR-1 continuous

26 0.64285714 0.80952381 M-1\nR-1 continuous

27 0.66666667 0.80952381 M-1\nR-1 continuous

28 0.69047619 0.80952381 M-1\nR-1 continuous

29 0.71428571 0.80952381 M-1\nR-1 continuous

30 0.71428571 0.85714286 M-1\nR-1 continuous

31 0.73809524 0.85714286 M-1\nR-1 continuous

32 0.76190476 0.85714286 M-1\nR-1 continuous

33 0.76190476 0.90476190 M-1\nR-1 continuous

34 0.76190476 0.95238095 M-1\nR-1 continuous

35 0.76190476 1.00000000 M-1\nR-1 continuous

36 0.78571429 1.00000000 M-1\nR-1 continuous

37 0.80952381 1.00000000 M-1\nR-1 continuous

38 0.83333333 1.00000000 M-1\nR-1 continuous

39 0.85714286 1.00000000 M-1\nR-1 continuous

40 0.88095238 1.00000000 M-1\nR-1 continuous

41 0.92857143 1.00000000 M-1\nR-1 continuous

42 1.00000000 1.00000000 M-1\nR-1 continuous

43 0.00000000 0.00000000 M-2\nR-1 continuous

44 0.07142857 0.04761905 M-2\nR-1 continuous

45 0.16666667 0.23809524 M-2\nR-1 continuous

46 0.16666667 0.33333333 M-2\nR-1 continuous

47 0.21428571 0.33333333 M-2\nR-1 continuous

48 0.21428571 0.38095238 M-2\nR-1 continuous

49 0.21428571 0.47619048 M-2\nR-1 continuous

50 0.21428571 0.52380952 M-2\nR-1 continuous

51 0.23809524 0.57142857 M-2\nR-1 continuous

52 0.28571429 0.57142857 M-2\nR-1 continuous

53 0.30952381 0.61904762 M-2\nR-1 continuous

54 0.35714286 0.61904762 M-2\nR-1 continuous

55 0.38095238 0.61904762 M-2\nR-1 continuous

56 0.40476190 0.61904762 M-2\nR-1 continuous

57 0.40476190 0.66666667 M-2\nR-1 continuous

58 0.42857143 0.66666667 M-2\nR-1 continuous

59 0.45238095 0.66666667 M-2\nR-1 continuous

60 0.45238095 0.71428571 M-2\nR-1 continuous

61 0.47619048 0.71428571 M-2\nR-1 continuous

62 0.47619048 0.76190476 M-2\nR-1 continuous

63 0.50000000 0.76190476 M-2\nR-1 continuous

64 0.50000000 0.80952381 M-2\nR-1 continuous

65 0.52380952 0.80952381 M-2\nR-1 continuous

66 0.52380952 0.85714286 M-2\nR-1 continuous

67 0.52380952 0.90476190 M-2\nR-1 continuous

68 0.52380952 0.95238095 M-2\nR-1 continuous

69 0.54761905 0.95238095 M-2\nR-1 continuous

70 0.54761905 1.00000000 M-2\nR-1 continuous

71 0.59523810 1.00000000 M-2\nR-1 continuous

72 0.61904762 1.00000000 M-2\nR-1 continuous

73 0.64285714 1.00000000 M-2\nR-1 continuous

74 0.66666667 1.00000000 M-2\nR-1 continuous

75 0.69047619 1.00000000 M-2\nR-1 continuous

76 0.71428571 1.00000000 M-2\nR-1 continuous

77 1.00000000 1.00000000 M-2\nR-1 continuous

# Dataset RA\_Lesion\_Bx\_Certainty

## FROC ANALYSIS

### Results

$fomArray

Rdr - 1

Trt - 1 0.6573129

Trt - 2 0.7854308

$msT

[1] 0.0082071

$msTR

[1] NaN

$varComp

varCov

Var(R) NaN

Var(T\*R) NaN

COV1 0.003619903

COV2 NaN

COV3 NaN

Var(Error) 0.006039102

$fFRRC

[1] 3.392487

$ddfFRRC

[1] Inf

$pFRRC

[1] 0.06549411

$ciDiffTrtFRRC

Treatment Estimate StdErr DF t Pr > t CI Lower CI Upper

1 1 - 2 -0.1281179 0.06955859 Inf -1.84187 0.06549411 -0.2644503 0.008214423

$ciAvgRdrEachTrtFRRC

Treatment Area StdErr DF CI Lower CI Upper

1 1 0.6573129 0.08404110 Inf 0.4925954 0.8220304

2 2 0.7854308 0.07081877 Inf 0.6466286 0.9242331

$ciDiffTrtEachRdr

Reader Treatment Estimate StdErr DF t Pr > t CI Lower CI Upper

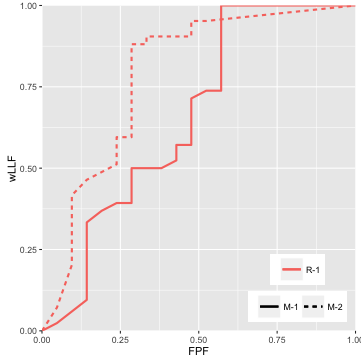
1 1 1 - 2 -0.1281179 0.06955859 Inf -1.84187 0.06549411 -0.2644503 0.008214423

$varCovEachRdr

Reader Var Cov1

1 1 0.006039102 0.003619903

### wAfroc Plot



### wAfroc Data Points

FPF wLLF class type

1 0.00000000 0.00000000 M-1\nR-1 continuous

2 0.04761905 0.02380952 M-1\nR-1 continuous

3 0.14285714 0.09523810 M-1\nR-1 continuous

4 0.14285714 0.23809524 M-1\nR-1 continuous

5 0.14285714 0.26190476 M-1\nR-1 continuous

6 0.14285714 0.33333333 M-1\nR-1 continuous

7 0.19047619 0.36904762 M-1\nR-1 continuous

8 0.23809524 0.39285714 M-1\nR-1 continuous

9 0.28571429 0.39285714 M-1\nR-1 continuous

10 0.28571429 0.41666667 M-1\nR-1 continuous

11 0.28571429 0.46428571 M-1\nR-1 continuous

12 0.28571429 0.50000000 M-1\nR-1 continuous

13 0.33333333 0.50000000 M-1\nR-1 continuous

14 0.38095238 0.50000000 M-1\nR-1 continuous

15 0.42857143 0.52380952 M-1\nR-1 continuous

16 0.42857143 0.54761905 M-1\nR-1 continuous

17 0.42857143 0.57142857 M-1\nR-1 continuous

18 0.47619048 0.57142857 M-1\nR-1 continuous

19 0.47619048 0.61904762 M-1\nR-1 continuous

20 0.47619048 0.64285714 M-1\nR-1 continuous

21 0.47619048 0.66666667 M-1\nR-1 continuous

22 0.47619048 0.69047619 M-1\nR-1 continuous

23 0.47619048 0.71428571 M-1\nR-1 continuous

24 0.52380952 0.73809524 M-1\nR-1 continuous

25 0.57142857 0.73809524 M-1\nR-1 continuous

26 0.57142857 0.76190476 M-1\nR-1 continuous

27 0.57142857 0.78571429 M-1\nR-1 continuous

28 0.57142857 0.80952381 M-1\nR-1 continuous

29 0.57142857 0.83333333 M-1\nR-1 continuous

30 0.57142857 0.85714286 M-1\nR-1 continuous

31 0.57142857 0.88095238 M-1\nR-1 continuous

32 0.57142857 0.90476190 M-1\nR-1 continuous

33 0.57142857 0.92857143 M-1\nR-1 continuous

34 0.57142857 0.95238095 M-1\nR-1 continuous

35 0.57142857 0.97619048 M-1\nR-1 continuous

36 0.57142857 1.00000000 M-1\nR-1 continuous

37 0.61904762 1.00000000 M-1\nR-1 continuous

38 0.66666667 1.00000000 M-1\nR-1 continuous

39 0.71428571 1.00000000 M-1\nR-1 continuous

40 0.76190476 1.00000000 M-1\nR-1 continuous

41 0.85714286 1.00000000 M-1\nR-1 continuous

42 1.00000000 1.00000000 M-1\nR-1 continuous

43 0.00000000 0.00000000 M-2\nR-1 continuous

44 0.04761905 0.07142857 M-2\nR-1 continuous

45 0.09523810 0.20238095 M-2\nR-1 continuous

46 0.09523810 0.25000000 M-2\nR-1 continuous

47 0.09523810 0.29761905 M-2\nR-1 continuous

48 0.09523810 0.32142857 M-2\nR-1 continuous

49 0.09523810 0.34523810 M-2\nR-1 continuous

50 0.09523810 0.36904762 M-2\nR-1 continuous

51 0.09523810 0.39285714 M-2\nR-1 continuous

52 0.09523810 0.41666667 M-2\nR-1 continuous

53 0.14285714 0.46428571 M-2\nR-1 continuous

54 0.19047619 0.48809524 M-2\nR-1 continuous

55 0.23809524 0.51190476 M-2\nR-1 continuous

56 0.23809524 0.53571429 M-2\nR-1 continuous

57 0.23809524 0.54761905 M-2\nR-1 continuous

58 0.23809524 0.57142857 M-2\nR-1 continuous

59 0.23809524 0.59523810 M-2\nR-1 continuous

60 0.28571429 0.59523810 M-2\nR-1 continuous

61 0.28571429 0.61904762 M-2\nR-1 continuous

62 0.28571429 0.64285714 M-2\nR-1 continuous

63 0.28571429 0.66666667 M-2\nR-1 continuous

64 0.28571429 0.69047619 M-2\nR-1 continuous

65 0.28571429 0.71428571 M-2\nR-1 continuous

66 0.28571429 0.73809524 M-2\nR-1 continuous

67 0.28571429 0.76190476 M-2\nR-1 continuous

68 0.28571429 0.78571429 M-2\nR-1 continuous

69 0.28571429 0.80952381 M-2\nR-1 continuous

70 0.28571429 0.83333333 M-2\nR-1 continuous

71 0.28571429 0.85714286 M-2\nR-1 continuous

72 0.28571429 0.88095238 M-2\nR-1 continuous

73 0.33333333 0.88095238 M-2\nR-1 continuous

74 0.33333333 0.90476190 M-2\nR-1 continuous

75 0.38095238 0.90476190 M-2\nR-1 continuous

76 0.42857143 0.90476190 M-2\nR-1 continuous

77 0.47619048 0.90476190 M-2\nR-1 continuous

78 0.47619048 0.92857143 M-2\nR-1 continuous

79 0.47619048 0.95238095 M-2\nR-1 continuous

80 0.52380952 0.95238095 M-2\nR-1 continuous

81 1.00000000 1.00000000 M-2\nR-1 continuous

## ROC ANALYSIS

### Results

$fomArray

Rdr - 1

Trt - 1 0.6972789

Trt - 2 0.8044218

$msT

[1] 0.005739796

$msTR

[1] NaN

$varComp

varCov

Var(R) NaN

Var(T\*R) NaN

COV1 0.003117305

COV2 NaN

COV3 NaN

Var(Error) 0.005674852

$fFRRC

[1] 2.244258

$ddfFRRC

[1] Inf

$pFRRC

[1] 0.1341112

$ciDiffTrtFRRC

Treatment Estimate StdErr DF t Pr > t CI Lower CI Upper

1 1 - 2 -0.1071429 0.07151989 Inf -1.498085 0.1341112 -0.2473193 0.03303355

$ciAvgRdrEachTrtFRRC

Treatment Area StdErr DF CI Lower CI Upper

1 1 0.6972789 0.08089529 Inf 0.5387271 0.8558308

2 2 0.8044218 0.06932284 Inf 0.6685515 0.9402920

$ciDiffTrtEachRdr

Reader Treatment Estimate StdErr DF t Pr > t CI Lower CI Upper

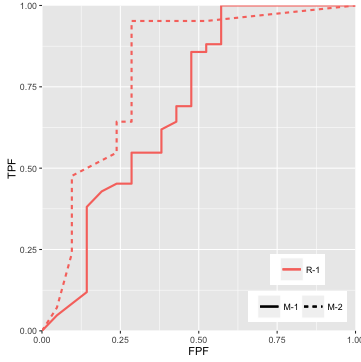
1 1 1 - 2 -0.1071429 0.07151989 Inf -1.498085 0.1341112 -0.2473193 0.03303355

$varCovEachRdr

Reader Var Cov1

1 1 0.005674852 0.003117305

### roc Plot



### roc Data Points

FPF TPF class type

1 0.00000000 0.00000000 M-1\nR-1 continuous

2 0.04761905 0.04761905 M-1\nR-1 continuous

3 0.14285714 0.11904762 M-1\nR-1 continuous

4 0.14285714 0.26190476 M-1\nR-1 continuous

5 0.14285714 0.28571429 M-1\nR-1 continuous

6 0.14285714 0.35714286 M-1\nR-1 continuous

7 0.14285714 0.38095238 M-1\nR-1 continuous

8 0.19047619 0.42857143 M-1\nR-1 continuous

9 0.23809524 0.45238095 M-1\nR-1 continuous

10 0.28571429 0.45238095 M-1\nR-1 continuous

11 0.28571429 0.47619048 M-1\nR-1 continuous

12 0.28571429 0.52380952 M-1\nR-1 continuous

13 0.28571429 0.54761905 M-1\nR-1 continuous

14 0.33333333 0.54761905 M-1\nR-1 continuous

15 0.38095238 0.54761905 M-1\nR-1 continuous

16 0.38095238 0.57142857 M-1\nR-1 continuous

17 0.38095238 0.61904762 M-1\nR-1 continuous

18 0.42857143 0.64285714 M-1\nR-1 continuous

19 0.42857143 0.66666667 M-1\nR-1 continuous

20 0.42857143 0.69047619 M-1\nR-1 continuous

21 0.47619048 0.69047619 M-1\nR-1 continuous

22 0.47619048 0.71428571 M-1\nR-1 continuous

23 0.47619048 0.73809524 M-1\nR-1 continuous

24 0.47619048 0.76190476 M-1\nR-1 continuous

25 0.47619048 0.78571429 M-1\nR-1 continuous

26 0.47619048 0.80952381 M-1\nR-1 continuous

27 0.47619048 0.83333333 M-1\nR-1 continuous

28 0.47619048 0.85714286 M-1\nR-1 continuous

29 0.52380952 0.85714286 M-1\nR-1 continuous

30 0.52380952 0.88095238 M-1\nR-1 continuous

31 0.57142857 0.88095238 M-1\nR-1 continuous

32 0.57142857 0.90476190 M-1\nR-1 continuous

33 0.57142857 0.92857143 M-1\nR-1 continuous

34 0.57142857 0.95238095 M-1\nR-1 continuous

35 0.57142857 0.97619048 M-1\nR-1 continuous

36 0.57142857 1.00000000 M-1\nR-1 continuous

37 0.61904762 1.00000000 M-1\nR-1 continuous

38 0.66666667 1.00000000 M-1\nR-1 continuous

39 0.71428571 1.00000000 M-1\nR-1 continuous

40 0.76190476 1.00000000 M-1\nR-1 continuous

41 0.85714286 1.00000000 M-1\nR-1 continuous

42 1.00000000 1.00000000 M-1\nR-1 continuous

43 0.00000000 0.00000000 M-2\nR-1 continuous

44 0.04761905 0.07142857 M-2\nR-1 continuous

45 0.09523810 0.23809524 M-2\nR-1 continuous

46 0.09523810 0.28571429 M-2\nR-1 continuous

47 0.09523810 0.33333333 M-2\nR-1 continuous

48 0.09523810 0.35714286 M-2\nR-1 continuous

49 0.09523810 0.40476190 M-2\nR-1 continuous

50 0.09523810 0.42857143 M-2\nR-1 continuous

51 0.09523810 0.47619048 M-2\nR-1 continuous

52 0.14285714 0.50000000 M-2\nR-1 continuous

53 0.19047619 0.52380952 M-2\nR-1 continuous

54 0.23809524 0.54761905 M-2\nR-1 continuous

55 0.23809524 0.57142857 M-2\nR-1 continuous

56 0.23809524 0.59523810 M-2\nR-1 continuous

57 0.23809524 0.61904762 M-2\nR-1 continuous

58 0.23809524 0.64285714 M-2\nR-1 continuous

59 0.28571429 0.64285714 M-2\nR-1 continuous

60 0.28571429 0.66666667 M-2\nR-1 continuous

61 0.28571429 0.69047619 M-2\nR-1 continuous

62 0.28571429 0.71428571 M-2\nR-1 continuous

63 0.28571429 0.73809524 M-2\nR-1 continuous

64 0.28571429 0.76190476 M-2\nR-1 continuous

65 0.28571429 0.78571429 M-2\nR-1 continuous

66 0.28571429 0.80952381 M-2\nR-1 continuous

67 0.28571429 0.83333333 M-2\nR-1 continuous

68 0.28571429 0.85714286 M-2\nR-1 continuous

69 0.28571429 0.88095238 M-2\nR-1 continuous

70 0.28571429 0.90476190 M-2\nR-1 continuous

71 0.28571429 0.95238095 M-2\nR-1 continuous

72 0.33333333 0.95238095 M-2\nR-1 continuous

73 0.38095238 0.95238095 M-2\nR-1 continuous

74 0.42857143 0.95238095 M-2\nR-1 continuous

75 0.47619048 0.95238095 M-2\nR-1 continuous

76 0.52380952 0.95238095 M-2\nR-1 continuous

77 1.00000000 1.00000000 M-2\nR-1 continuous