Examples

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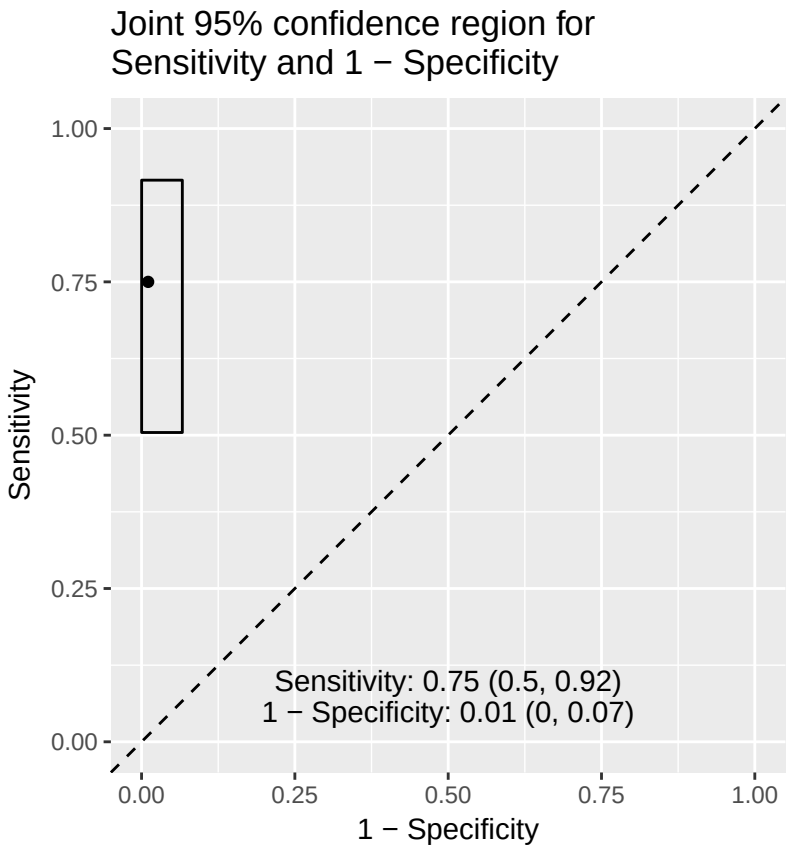
Contents

ComputeCR.BDT()

Plot the confidence region for "sensitivity" and "1- specificity" of the Binary Diagnostic Test (BDT)

```
ComputeCR.BDT(
  tp = 18, fn = 6, fp = 1,
  tn = 92, one.sided = F
)
```

```
## $cr
##    tpf        fpf   tpf.min   tpf.max      fpf.min    fpf.max
## 1 0.75 0.01075269 0.5043951 0.9158798 0.0001369918 0.06651162
##
## $cr.plot
```



ComputeSS.BDT.Phase2()

Compute the phase 2 sample size for evaluating the Binary Diagnostic Test (BDT)

```
ComputeSS.BDT.Phase2(
  TPF_0 = 0.75, FPF_0 = 0.2,
  TPF_1 = 0.9, FPF_1 = 0.05,
  alpha = 0.1, beta = 0.1
)
```

```
## $n.diseased
## [1] 64
##
## $n.nondiseased
## [1] 46
```

SimulatePower.BDT.Phase2()

Obtain the simulated power using the given sample size.

```
SimulatePower.BDT.Phase2(
  n.diseased = 64, n.nondiseased = 46,
  TPF_0 = 0.75, FPF_0 = 0.2,
  TPF_1 = 0.9, FPF_1 = 0.05,
  conf.level = 0.95,
```

```
  B = 100, seed = 185
)
```

```
## Power from  100  simulations =  0.65
```

ComputeSS.BDT.Phase3()

Compute the phase 3 sample size for comparing the Binary Diagnostic Tests (BDT)

```
ComputeSS.BDT.Phase3(
  delta_0_T = 1, delta_0_F = 10,
  TPF_A = 0.9, FPF_A = 0.01,
  TPF_B = 0.75, FPF_B = 0.01,
  alpha = 0.05, beta = 0.2
)
```

```
## $n.diseased
## [1] 161
##
## $n.nondiseased
## [1] 388
```