

ログランク検定

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1 目的

ログランク検定を行う。

2 使用法

```
from logrank_test import logrank_test
logrank_test(group, event, time, verbose=True)
```

2.1 引数

group	群を識別するベクトル (2種類の値を取るなら整数値に限らない)
event	死亡なら1, 生存なら0の値をとるベクトル
time	生存期間ベクトル
verbose	必要最小限のプリント出力をする

2.2 戻り値の名前

"chisq"	検定統計量 (χ^2 分布にしたがう)
"df"	自由度 (常に1)
"p value"	p 値
"result"	集計表

3 使用例

```
group = [1, 1, 2, 2, 1, 1, 2, 2, 1, 2, 2, 1, 1, 1,
         2, 2, 2, 1, 1, 2, 1, 2, 1, 2, 1, 2, 2, 1, 1, 1]
event = [1, 0, 1, 1, 0, 0, 1, 0, 0, 0, 1, 1, 0, 0,
         0, 1, 0, 0, 1, 1, 0, 1, 0, 0, 1, 0, 1, 0, 0, 0]
time = [2, 20, 5, 1, 3, 17, 2, 3, 15, 14, 12, 13, 11,
        11, 10, 8, 8, 3, 7, 3, 6, 2, 5, 4, 2, 3, 1, 3, 2, 1]

import sys
sys.path.append("statlib")
from logrank_test import logrank_test

a = logrank_test(group, event, time)
```

logrank test

```
chisq = 3.3805, d.f. = 1, p value = 0.066
```

グループの指定は、整数値でなくてもよい。

```
group2 = ["male", "male", "female", "female", "male", "male",  
          "female", "female", "male", "female", "female", "male",  
          "male", "male", "female", "female", "female", "male",  
          "male", "female", "male", "female", "male", "female",  
          "male", "female", "female", "male", "male", "male"]
```

```
a = logrank_test(group2, event, time)
```

logrank test

```
chisq = 3.3805, d.f. = 1, p value = 0.066
```