aov(master2$time~master2$ct)

Call:

aov(formula = master2$time ~ master2$ct)

Terms:

master2$ct Residuals

Sum of Squares 78.6392 323.2229

Deg. of Freedom 3 112

Residual standard error: 1.698799

Estimated effects may be unbalanced

649 observations deleted due to missingness

> fit= aov(master2$time~master2$ct)

>> TukeyHSD(fit)

Tukey multiple comparisons of means

95% family-wise confidence level

Fit: aov(formula = master2$time ~ master2$ct)

$`master2$ct`

diff lwr upr p adj

L-H 2.4528302 0.5444450 4.3612154 0.0059469

M-H 1.1470588 -0.8148034 3.1089211 0.4261737

VL-H 2.9130435 0.8820288 4.9440581 0.0016372

M-L -1.3057714 -2.2792711 -0.3322716 0.0037102

VL-L 0.4602133 -0.6460501 1.5664767 0.6994231

VL-M 1.7659847 0.5698291 2.9621402 0.0011147

# Time to Positivity

culture smear ct n mean sd

(chr) (chr) (chr) (int) (dbl) (dbl)

1 Negative Negative L 17 7.882353 0.4850713

2 Negative Negative M 6 8.000000 0.0000000

3 Negative Negative VL 10 8.000000 0.0000000

4 Negative Negative NA 520 7.684615 1.1549316

5 Negative Positive L 2 8.000000 0.0000000

6 Negative Positive M 2 8.000000 0.0000000

7 Negative Positive VL 1 8.000000 NaN

8 Negative Positive NA 1 8.000000 NaN

9 Positive Negative H 1 3.000000 NaN

10 Positive Negative L 26 5.884615 1.5576116

11 Positive Negative M 9 4.555556 1.6666667

12 Positive Negative VL 12 5.916667 1.6213537

13 Positive Negative NA 128 7.781250 0.8956368

14 Positive Positive H 5 4.200000 1.6431677

15 Positive Positive L 8 4.875000 0.8345230

16 Positive Positive M 17 4.117647 0.8574929

master2 %>% group\_by(culture,ct) %>% summarize(n=n())

Source: local data frame [9 x 3]

Groups: culture [?]

culture ct n

(chr) (chr) (int)

1 Negative L 19

2 Negative M 8

3 Negative VL 11

4 Negative NA 521

5 Positive H 6

6 Positive L 34

7 Positive M 26

8 Positive VL 12

9 Positive NA 128

master2 %>% group\_by(culture,smear,xpert) %>% summarize(n=n())

Source: local data frame [7 x 4]

Groups: culture, smear [?]

culture smear xpert n

(chr) (chr) (chr) (int)

1 Negative Negative Negative 520

2 Negative Negative Positive 33

3 Negative Positive Negative 1

4 Negative Positive Positive 5

5 Positive Negative Negative 128

6 Positive Negative Positive 48

7 Positive Positive Positive 30

|  |
| --- |
| specimen culture smear xpert n  1 BAL Negative Negative Negative 238  2 BAL Negative Negative Positive 16  3 BAL Negative Positive Positive 2  4 BAL Positive Negative Negative 61  5 BAL Positive Negative Positive 23  6 BAL Positive Positive Positive 18  7 Others Negative Negative Negative 98  8 Others Negative Negative Positive 14  9 Others Negative Positive Positive 2  10 Others Positive Negative Negative 31  11 Others Positive Negative Positive 16  12 Others Positive Positive Positive 2  13 Pleural Negative Negative Negative 127  14 Pleural Negative Negative Positive 2  15 Pleural Positive Negative Negative 32  16 Pleural Positive Negative Positive 2  17 Pleural Positive Positive Positive 1  18 Sputum Negative Negative Negative 57  19 Sputum Negative Negative Positive 1  20 Sputum Negative Positive Negative 1  21 Sputum Negative Positive Positive 1  22 Sputum Positive Negative Positive 7  23 Sputum Positive Negative Negative 4  24 Sputum Positive Positive Positive 9 |
|  |
| |  | | --- | |  | |

specimen culture ct n

1 BAL Negative <NA> 238

2 BAL Negative L 9

3 BAL Negative VL 5

4 BAL Negative M 4

5 BAL Positive <NA> 61

6 BAL Positive M 17

7 BAL Positive L 16

8 BAL Positive VL 6

9 BAL Positive H 2

10 Others Negative <NA> 98

11 Others Negative L 7

12 Others Negative VL 5

13 Others Negative M 4

14 Others Positive <NA> 31

15 Others Positive L 12

16 Others Positive M 3

17 Others Positive VL 3

18 Pleural Negative <NA> 127

19 Pleural Negative L 2

20 Pleural Positive <NA> 32

21 Pleural Positive L 2

22 Pleural Positive H 1

23 Sputum Negative <NA> 58

24 Sputum Negative L 1

25 Sputum Negative VL 1

26 Sputum Positive M 6

27 Sputum Positive L 4

28 Sputum Positive <NA> 4

29 Sputum Positive H 3

30 Sputum Positive VL 3

specimen culture smear ct n mean sd

1 BAL Negative Negative L 8 7.750000 0.7071068

2 BAL Negative Negative M 3 8.000000 0.0000000

3 BAL Negative Negative VL 5 8.000000 0.0000000

4 BAL Negative Negative <NA> 238 7.764706 0.8686367

5 BAL Negative Positive L 1 8.000000 NaN

6 BAL Negative Positive M 1 8.000000 NaN

7 BAL Positive Negative L 12 5.500000 1.6236883

8 BAL Positive Negative M 5 3.800000 1.3038405

9 BAL Positive Negative VL 6 6.333333 1.6329932

10 BAL Positive Negative <NA> 61 7.786885 0.9851354

11 BAL Positive Positive H 2 3.500000 0.7071068

12 BAL Positive Positive L 4 5.000000 0.8164966

13 BAL Positive Positive M 12 4.250000 0.9653073

14 Others Negative Negative L 6 8.000000 0.0000000

15 Others Negative Negative M 3 8.000000 0.0000000

16 Others Negative Negative VL 5 8.000000 0.0000000

17 Others Negative Negative <NA> 98 7.591837 1.3760599

18 Others Negative Positive L 1 8.000000 NaN

19 Others Negative Positive M 1 8.000000 NaN

20 Others Positive Negative L 11 6.181818 1.5374122

21 Others Positive Negative M 2 4.500000 0.7071068

22 Others Positive Negative VL 3 6.666667 1.5275252

23 Others Positive Negative <NA> 31 7.870968 0.5622535

24 Others Positive Positive L 1 6.000000 NaN

25 Others Positive Positive M 1 4.000000 NaN

26 Pleural Negative Negative L 2 8.000000 0.0000000

27 Pleural Negative Negative <NA> 127 7.732283 1.1370305

28 Pleural Positive Negative H 1 3.000000 NaN

29 Pleural Positive Negative L 1 8.000000 NaN

30 Pleural Positive Negative <NA> 32 7.843750 0.7233156

31 Pleural Positive Positive L 1 5.000000 NaN

32 Sputum Negative Negative L 1 8.000000 NaN

33 Sputum Negative Negative <NA> 57 7.403509 1.6888251

34 Sputum Negative Positive VL 1 8.000000 NaN

35 Sputum Negative Positive <NA> 1 8.000000 NaN

36 Sputum Positive Negative L 2 5.500000 0.7071068

37 Sputum Positive Negative M 2 6.500000 2.1213203

38 Sputum Positive Negative VL 3 4.333333 0.5773503

39 Sputum Positive Negative <NA> 4 6.500000 1.9148542

40 Sputum Positive Positive H 3 4.666667 2.0816660

41 Sputum Positive Positive L 2 4.000000 0.0000000

42 Sputum Positive Positive M 4 3.750000 0.5000000

table(master2$xpert,master2$culture)

Negative Positive

Negative 521 128

Positive 38 78

> 78/128

[1] 0.609375

> table(master2$smear,master2$culture)

Negative Positive

Negative 553 176

Positive 6 30

master2 %>% group\_by(specimen) %>% filter(xpert=="Negative",culture=="Positive") %>% summarize(

+ n=n()) %>% mutate(proportion = n/k2$n)

# A tibble: 4 x 3

specimen n proportion

<chr> <int> <dbl>

1 BAL 61 0.1703911

2 Others 31 0.1901840

3 Pleural 32 0.1951220

4 Sputum 4 0.0500000

master2 %>% group\_by(specimen) %>% filter(xpert=="Negative",culture=="Positive") %>% summarize(

+ n=n()) %>% mutate(proportion = n/k2$n)

# A tibble: 4 x 3

specimen n proportion

<chr> <int> <dbl>

1 BAL 61 0.1703911

2 Others 31 0.1901840

3 Pleural 32 0.1951220

4 Sputum 4 0.0500000

> master2 %>% filter(xpert=="Negative",culture=="Positive") %>% summarize(n=n(),mean\_TTP= mean(time), sd(time))

n mean\_TTP sd(time)

1 128 7.78125 0.8956368

summary(as.factor(master2$ctd))

Discordant H L M VL NA's

128 6 53 34 23 521

|  |
| --- |
| > summary(fit1)  Df Sum Sq Mean Sq F value Pr(>F)  master2$ctd 4 264.3 66.08 37.15 <2e-16 \*\*\*  Residuals 239 425.1 1.78  ---  Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1  521 observations deleted due to missingness |
| |  | | --- | | > | |
|  |

Tukey multiple comparisons of means

95% family-wise confidence level

Fit: aov(formula = master2$time ~ master2$ctd)

$`master2$ctd`

diff lwr upr p adj

H-Discordant -3.7812500 -5.3125042 -2.24999584 0.0000000

L-Discordant -1.3284198 -1.9272061 -0.72963351 0.0000000

M-Discordant -2.6341912 -3.3414666 -1.92691577 0.0000000

VL-Discordant -0.8682065 -1.6984301 -0.03798294 0.0354020

L-H 2.4528302 0.8738091 4.03185130 0.0002715

M-H 1.1470588 -0.4762098 2.77032748 0.2979244

VL-H 2.9130435 1.2325573 4.59352967 0.0000322

M-L -1.3057714 -2.1112569 -0.50028587 0.0001245

VL-L 0.4602133 -0.4551225 1.37554906 0.6398102

VL-M 1.7659847 0.7762710 2.75569827 0.0000170