รายการอ้างอิง

รายการอ้างอิงภาษาไทย

สาโรช จรรยาแพทย์ อภิชาต ศรีฟ้าวัฒนา สหพล รัตนตัณฑ์ อนุเทพ รังสีพิพัฒน์ สมพร เตชะงาม สุวรรณ และ รุ่งโรจน์ ธนาวงษ์นุเวช. 2544. การวินิจฉัยแยกเกรดและพยากรณ์เนื้องอกชนิดมาสต์เซลล์ในสุนัข. เวชสารสัตวแพทย์ 31(3): 13-27.

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ภาคผนวก

Paired T-Test and CI: AgNORsPr, AgNORsPt

```
Paired T for AgNORs

                 N      Mean     StDev   SE Mean
Pr              11     1.842     0.421     0.127
Pt              11     1.598     0.309     0.093
Difference      11    0.2436    0.2680    0.0808

95% CI for mean difference: (0.0636, 0.4237)
T-Test of mean difference = 0 (vs not = 0): T-Value = 3.02  P-Value = 0.013
```

Paired T-Test and CI: PCNAPr, PCNAPt

```
Paired T for PCNA

                 N      Mean     StDev   SE Mean
Pr              11     18.55      5.90      1.78
Pt              11     12.40      7.15      2.16
Difference      11      6.14      4.05      1.22

95% CI for mean difference: (3.42, 8.86)
T-Test of mean difference = 0 (vs not = 0): T-Value = 5.03  P-Value = 0.001
```

Paired T-Test and CI: KiPR, KiPt

```
Paired T for Ki-67

                 N      Mean     StDev   SE Mean
Pr              11      6.56      5.92      1.78
Pt              11      1.91      1.35      0.41
Difference      11      4.65      5.08      1.53

95% CI for mean difference: (1.24, 8.07)
T-Test of mean difference = 0 (vs not = 0): T-Value = 3.04  P-Value = 0.012
```

Paired T-Test and CI: PGPPr, PGPPt

```
Paired T for PGP

                 N      Mean     StDev   SE Mean
Pr              11     11.40      6.11      1.84
Pt              11      9.40      5.61      1.69
Difference      11      2.00      4.66      1.40

95% CI for mean difference: (-1.13, 5.13)
T-Test of mean difference = 0 (vs not = 0): T-Value = 1.42  P-Value = 0.185
```

Paired T-Test and CI: MRPPr, MRPPt

```
Paired T for MRP

                 N      Mean     StDev   SE Mean
Pr              11     21.95     24.59      7.41
Pt              11     17.45     22.96      6.92
Difference      11      4.49     22.91      6.91

95% CI for mean difference: (-10.90, 19.88)
T-Test of mean difference = 0 (vs not = 0): T-Value = 0.65  P-Value = 0.530
```

One-way ANOVA: Ag<100Pr, Ag100-200Pr, Ag>200Pr

```
Analysis of Variance
Source      DF        SS        MS        F        P
Factor       2     0.353     0.177     1.09    0.355
Error       20     3.232     0.162
Total       22     3.585

                                      Individual 95% CIs For Mean
                                      Based on Pooled StDev
Level        N      Mean     StDev  --+---------+---------+---------+----
Ag<100Pr    11    1.7109    0.4014   (-------*-------)
Ag100-20     9    1.9122    0.3436        (---------*--------)
Ag>200Pr     3    2.0433    0.5816     (---------------*---------------)
                                      --+---------+---------+---------+----
Pooled StDev =    0.4020              1.50      1.80      2.10      2.40
```

One-way ANOVA: PCNA<100Pr, PCNA100-200Pr, PCNA>200Pr

```
Analysis of Variance
Source      DF        SS        MS        F        P
Factor       2     349.2     174.6     2.28    0.129
Error       20    1535.0      76.7
Total       22    1884.2

                                      Individual 95% CIs For Mean
                                      Based on Pooled StDev
Level        N      Mean     StDev  --------+---------+---------+--------
PCNA<100    11    22.545     8.110                    (------*------)
PCNA100-     9    16.067     8.930           (-------*-------)
PCNA>200     3    12.267    10.937  (------------*-------------)
                                      --------+---------+---------+--------
Pooled StDev =     8.761                   8.0      16.0      24.0
```

One-way ANOVA: Ki<100Pr, Ki100-200Pr, Ki>200Pr

```
Analysis of Variance
Source      DF        SS        MS        F        P
Factor       2     87.2      43.6     0.82    0.455
Error       20   1063.3      53.2
Total       22   1150.4

                                      Individual 95% CIs For Mean
                                      Based on Pooled StDev
Level        N      Mean     StDev  -+---------+---------+---------+-----
Ki<100Pr    11    8.400     7.950                  (-------*-------)
Ki100-20     9    6.467     7.041               (--------*--------)
Ki>200Pr     3    2.400     4.157  (--------------*---------------)
                                      -+---------+---------+---------+-----
Pooled StDev =     7.291         -6.0       0.0       6.0      12.0
```

One-way ANOVA: PGP<100Pr, PGP100-200Pr, PGP>200Pr

```
Analysis of Variance
Source      DF        SS        MS        F        P
Factor       2     76.0      38.0     0.92    0.415
Error       20    825.3      41.3
Total       22    901.3

                                      Individual 95% CIs For Mean
                                      Based on Pooled StDev
Level        N      Mean     StDev  ---+---------+---------+---------+---
PGP<100P    11    7.236     4.362            (-------*--------)
PGP100-2     9   10.800     8.346                    (--------*--------)
PGP>200P     3    6.600     6.239   (--------------*---------------)
                                      ---+---------+---------+---------+---
Pooled StDev =     6.424              0.0       5.0      10.0      15.0
```

One-way ANOVA: MRP<100Pr, MRP100-200Pr, MRP>200

```
Analysis of Variance
Source     DF        SS        MS        F        P
Factor      2      1051       525     1.24    0.312
Error      20      8504       425
Total      22      9555

                                    Individual 95% CIs For Mean
                                    Based on Pooled StDev
Level       N      Mean     StDev  ----------+---------+---------+------
MRP<100P   11     11.35     19.25           (--------*-------)
MRP100-2    9     25.09     22.61                    (---------*--------)
MRP>200     3     10.87     18.82   (----------------*----------------)
                                    ----------+---------+---------+------
Pooled StDev =    20.62                       0         15        30
```

One-way ANOVA: Ag<100Pt, Ag100-200Pt, Ag>200Pt

```
Analysis of Variance
Source     DF        SS        MS        F        P
Factor      2    0.1936    0.0968     1.02    0.404
Error       8    0.7600    0.0950
Total      10    0.9536

                                    Individual 95% CIs For Mean
                                    Based on Pooled StDev
Level       N      Mean     StDev  --------+---------+---------+--------
Ag<100Pt    5    1.4540    0.1454  (---------*---------)
Ag100-20    4    1.7025    0.3906        (----------*---------)
Ag>200Pt    2    1.7500    0.4667     (-------------*-------------)
                                    --------+---------+---------+--------
Pooled StDev =   0.3082              1.40      1.75      2.10
```

One-way ANOVA: PCNA<100Pt, PCNA100-200Pt, PCNA>200Pt

```
Analysis of Variance
Source     DF        SS        MS        F        P
Factor      2      26.5      13.2     0.22    0.808
Error       8     484.4      60.6
Total      10     510.9

                                    Individual 95% CIs For Mean
                                    Based on Pooled StDev
Level       N      Mean     StDev  --------+---------+---------+--------
PCNA<100    5    13.120     7.564       (-----------*----------)
PCNA100-    4    10.460     8.467  (------------*------------)
PCNA>200    2    14.500     6.364   (------------------*------------------)
                                    --------+---------+---------+--------
Pooled StDev =    7.782              7.0       14.0      21.0
```

One-way ANOVA: Ki<100Pt, Ki100-200Pt, Ki>200Pt

```
Analysis of Variance
Source     DF        SS        MS        F        P
Factor      2      5.55      2.78     1.73    0.237
Error       8     12.80      1.60
Total      10     18.35

                                    Individual 95% CIs For Mean
                                    Based on Pooled StDev
Level       N      Mean     StDev  ---------+---------+---------+-------
Ki<100Pt    5     1.680     1.188              (-------*--------)
Ki100-20    4     2.750     1.399                      (--------*---------)
Ki>200Pt    2     0.800     1.131   (------------*-------------)
                                    ---------+---------+---------+-------
Pooled StDev =    1.265              0.0       1.5       3.0
```

One-way ANOVA: PGP<100Pt, PGP100-200Pt, PGP>200Pt

```
Analysis of Variance
Source      DF        SS        MS        F        P
Factor       2      15.7       7.9     0.21    0.814
Error        8     298.5      37.3
Total       10     314.2

                                    Individual 95% CIs For Mean
                                    Based on Pooled StDev
Level        N      Mean     StDev  ------+---------+---------+---------+
PGP<100P     5    10.160     4.947            (----------*---------)
PGP100-2     4     9.700     5.927          (-----------*-----------)
PGP>200P     2     6.900     9.758  (----------------*----------------)
                                    ------+---------+---------+---------+
Pooled StDev =     6.108              0.0       6.0      12.0      18.0
```

One-way ANOVA: MRP<100Pt, MRP100-200Pt, MRP>200Pt

```
Analysis of Variance
Source      DF        SS        MS        F        P
Factor       2       253       126     0.20    0.822
Error        8      5021       628
Total       10      5274

                                    Individual 95% CIs For Mean
                                    Based on Pooled StDev
Level        N      Mean     StDev  ----------+---------+---------+------
MRP<100P     5     13.00     20.76       (---------*----------)
MRP100-2     4     23.60     30.36          (----------*-----------)
MRP>200P     2     16.30     23.05  (----------------*----------------)
                                    ----------+---------+---------+------
Pooled StDev =     25.05                     0        25        50
```

One-way ANOVA: AgPRPr, AgSDPr

```
Analysis of Variance
Source      DF        SS        MS        F        P
Factor       1     0.359     0.359     2.33    0.141
Error       21     3.227     0.154
Total       22     3.585

                                    Individual 95% CIs For Mean
                                    Based on Pooled StDev
Level        N      Mean     StDev  -------+---------+---------+---------
AgPRPr      18    1.7672    0.3797  (-------*------)
AgSDPr       5    2.0700    0.4403       (--------------*-------------)
                                    -------+---------+---------+---------
Pooled StDev =    0.3920               1.75      2.00      2.25
```

One-way ANOVA: PCNAPRPr, PCNASDPr

```
Analysis of Variance
Source      DF        SS        MS        F        P
Factor       1      26.9      26.9     0.30    0.587
Error       21    1857.3      88.4
Total       22    1884.2

                                    Individual 95% CIs For Mean
                                    Based on Pooled StDev
Level        N      Mean     StDev  -------+---------+---------+---------
PCNAPRPr    18    18.100    10.048      (--------*--------)
PCNASDPr     5    20.720     5.937   (----------------*----------------)
                                    -------+---------+---------+---------
Pooled StDev =    9.405               15.0      20.0      25.0
```

One-way ANOVA: KiPRPr, KiSDPr

```
Analysis of Variance
Source      DF        SS        MS        F        P
Factor       1      66.3      66.3     1.28    0.270
Error       21    1084.2      51.6
Total       22    1150.4

                                      Individual 95% CIs For Mean
                                      Based on Pooled StDev
Level       N      Mean     StDev  --------+---------+---------+--------
KiPRPr     18     7.756     7.704                    (-------*--------)
KiSDPr      5     3.640     4.337  (-----------------*-----------------)
                                    --------+---------+---------+--------
Pooled StDev =    7.185               0.0       4.0       8.0
```

One-way ANOVA: PGPPRPr, PGPSDPr

```
Analysis of Variance
Source      DF        SS        MS        F        P
Factor       1      26.3      26.3     0.63    0.436
Error       21     875.0      41.7
Total       22     901.3

                                      Individual 95% CIs For Mean
                                      Based on Pooled StDev
Level       N      Mean     StDev  ---------+---------+---------+-------
PGPPRPr    18     9.111     6.847                  (--------*--------)
PGPSDPr     5     6.520     4.415  (-----------------*-----------------)
                                    ---------+---------+---------+-------
Pooled StDev =    6.455              3.5       7.0       10.5
```

One-way ANOVA: MRPPRPr, MRPSDPr

```
Analysis of Variance
Source      DF        SS        MS        F        P
Factor       1       419       419     0.96    0.338
Error       21      9136       435
Total       22      9555

                                      Individual 95% CIs For Mean
                                      Based on Pooled StDev
Level       N      Mean     StDev  -------+---------+---------+---------
MRPPRPr    18     14.41     19.32  (--------*--------)
MRPSDPr     5     24.76     26.41   (----------------*----------------)
                                    -------+---------+---------+---------
Pooled StDev =   20.86               12        24        36
```

One-way ANOVA: AgPRPt, AgSDPt

```
Analysis of Variance
Source      DF        SS        MS        F        P
Factor       1    0.2217    0.2217     2.73    0.133
Error        9    0.7319    0.0813
Total       10    0.9536

                                      Individual 95% CIs For Mean
                                      Based on Pooled StDev
Level       N      Mean     StDev  ---------+---------+---------+-------
AgPRPt      8    1.5113    0.2607  (---------*---------)
AgSDPt      3    1.8300    0.3579          (--------------*--------------)
                                    ---------+---------+---------+-------
Pooled StDev =   0.2852              1.50      1.75      2.00
```

One-way ANOVA: PCNAPRPt, PCNASDPt

```
Analysis of Variance
Source      DF        SS        MS        F        P
Factor       1      18.7      18.7     0.34    0.573
Error        9     492.2      54.7
Total       10     510.9

                                      Individual 95% CIs For Mean
                                      Based on Pooled StDev
Level        N      Mean     StDev  --+---------+---------+---------+----
PCNAPRPt     8    11.605     8.033   (---------*---------)
PCNASDPt     3    14.533     4.500  (---------------*---------------)
                                    --+---------+---------+---------+----
Pooled StDev =    7.395              6.0       12.0      18.0      24.0
```

One-way ANOVA: KiPRPt, KiSDPt

```
Analysis of Variance
Source      DF        SS        MS        F        P
Factor       1      0.58      0.58     0.30    0.600
Error        9     17.77      1.97
Total       10     18.35

                                      Individual 95% CIs For Mean
                                      Based on Pooled StDev
Level        N      Mean     StDev  ----+---------+---------+---------+--
KiPRPt       8    2.050     1.376               (-----------*----------)
KiSDPt       3    1.533     1.501   (-----------------*-----------------)
                                    ----+---------+---------+---------+--
Pooled StDev =    1.405              0.0       1.0       2.0       3.0
```

One-way ANOVA: PGPPRPt, PGPSDPt

```
Analysis of Variance
Source      DF        SS        MS        F        P
Factor       1      70.5      70.5     2.60    0.141
Error        9     243.8      27.1
Total       10     314.2

                                      Individual 95% CIs For Mean
                                      Based on Pooled StDev
Level        N      Mean     StDev  ----+---------+---------+---------+--
PGPPRPt      8    10.950     4.351                    (-------*-------)
PGPSDPt      3     5.267     7.457   (-------------*------------)
                                    ----+---------+---------+---------+--
Pooled StDev =    5.204              0.0       5.0      10.0      15.0
```

One-way ANOVA: MRPPRPT, MRPSDPt

```
Analysis of Variance
Source      DF        SS        MS        F        P
Factor       1       881       881     1.80    0.212
Error        9      4393       488
Total       10      5274

                                      Individual 95% CIs For Mean
                                      Based on Pooled StDev
Level        N      Mean     StDev  ---+---------+---------+---------+---
MRPPRPT      8    11.98     18.40   (--------*--------)
MRPSDPt      3    32.07     31.80        (-------------*-------------)
                                    ---+---------+---------+---------+---
Pooled StDev =    22.09               0        20        40        60
```

One-way ANOVA: Ag+Pr, Ag-Pr

```
Analysis of Variance
Source      DF        SS        MS        F        P
Factor       1     0.058     0.058     0.34    0.565
Error       21     3.528     0.168
Total       22     3.585

                                      Individual 95% CIs For Mean
                                      Based on Pooled StDev
Level       N      Mean     StDev  -----+---------+---------+---------+-
Ag+Pr      10    1.7760    0.3238  (-------------*------------)
Ag-Pr      13    1.8769    0.4641        (-----------*-----------)
                                    -----+---------+---------+---------+-
Pooled StDev =    0.4099              1.60      1.80      2.00      2.20
```

One-way ANOVA: PCNA+Pr, PCNA-Pr

```
Analysis of Variance
Source      DF        SS        MS        F        P
Factor       1       0.6       0.6     0.01    0.933
Error       21    1883.6      89.7
Total       22    1884.2

                                      Individual 95% CIs For Mean
                                      Based on Pooled StDev
Level       N      Mean     StDev  ----+---------+---------+---------+--
PCNA+Pr    10    18.860     6.010  (-----------------*-----------------)
PCNA-Pr    13    18.523    11.396   (---------------*---------------)
                                    ----+---------+---------+---------+--
Pooled StDev =    9.471              14.0      17.5      21.0      24.5
```

One-way ANOVA: Ki+Pr, Ki-Pr

```
Analysis of Variance
Source      DF        SS        MS        F        P
Factor       1       5.5       5.5     0.10    0.753
Error       21    1144.9      54.5
Total       22    1150.4

                                      Individual 95% CIs For Mean
                                      Based on Pooled StDev
Level       N      Mean     StDev  ---+---------+---------+---------+---
Ki+Pr      10    7.420     5.793    (---------------*---------------)
Ki-Pr      13    6.431     8.381  (-------------*--------------)
                                   ---+---------+---------+---------+---
Pooled StDev =    7.384             3.0       6.0       9.0      12.0
```

One-way ANOVA: PGP+Pr, PGP-Pr

```
Analysis of Variance
Source      DF        SS        MS        F        P
Factor       1       7.5       7.5     0.18    0.678
Error       21     893.8      42.6
Total       22     901.3

                                      Individual 95% CIs For Mean
                                      Based on Pooled StDev
Level       N      Mean     StDev  ---+---------+---------+---------+---
PGP+Pr     10    9.200     8.385     (---------------*---------------)
PGP-Pr     13    8.046     4.663  (--------------*--------------)
                                   ---+---------+---------+---------+---
Pooled StDev =    6.524             5.0       7.5      10.0      12.5
```

One-way ANOVA: MRP+Pr, MRP-Pr

```
Analysis of Variance
Source      DF        SS        MS        F        P
Factor       1       181       181     0.41    0.531
Error       21      9374       446
Total       22      9555

                                      Individual 95% CIs For Mean
                                      Based on Pooled StDev
Level       N      Mean     StDev  --------+---------+---------+--------
MRP+Pr     10     19.86     27.98      (-------------*-------------)
MRP-Pr     13     14.20     13.93  (-----------*-----------)
                                    --------+---------+---------+--------
Pooled StDev =    21.13                  10        20        30
```

One-way ANOVA: Ag+Pt, Ag-Pt

```
Analysis of Variance
Source      DF        SS        MS        F        P
Factor       1    0.005     0.005     0.05    0.829
Error        9    0.948     0.105
Total       10    0.954

                                      Individual 95% CIs For Mean
                                      Based on Pooled StDev
Level       N      Mean     StDev  -------+---------+---------+---------
Ag+Pt       6    1.5783    0.2201   (--------------*--------------)
Ag-Pt       5    1.6220    0.4201    (---------------*----------------)
                                    -------+---------+---------+---------
Pooled StDev =    0.3246              1.40      1.60      1.80
```

One-way ANOVA: PCNA+Pt, PCNA-Pt

```
Analysis of Variance
Source      DF        SS        MS        F        P
Factor       1     158.3     158.3     4.04    0.075
Error        9     352.6      39.2
Total       10     510.9

                                      Individual 95% CIs For Mean
                                      Based on Pooled StDev
Level       N      Mean     StDev  -------+---------+---------+---------
PCNA+Pt     6    15.867     3.861                (--------*---------)
PCNA-Pt     5     8.248     8.337  (----------*---------)
                                    -------+---------+---------+---------
Pooled StDev =    6.259               6.0       12.0      18.0
```

One-way ANOVA: Ki+Pt, Ki-Pt

```
Analysis of Variance
Source      DF        SS        MS        F        P
Factor       1     3.63      3.63     2.22    0.171
Error        9    14.72      1.64
Total       10    18.35

                                      Individual 95% CIs For Mean
                                      Based on Pooled StDev
Level       N      Mean     StDev  -+---------+---------+---------+-----
Ki+Pt       6    2.433     1.494                 (----------*-----------)
Ki-Pt       5    1.280     0.944   (------------*------------)
                                    -+---------+---------+---------+-----
Pooled StDev =    1.279          0.0       1.0       2.0       3.0
```

One-way ANOVA: PGP+Pt, PGP-Pt

```
Analysis of Variance
Source      DF        SS        MS        F        P
Factor       1      38.1      38.1     1.24    0.294
Error        9     276.1      30.7
Total       10     314.2

                                      Individual 95% CIs For Mean
                                      Based on Pooled StDev
Level       N      Mean     StDev  ----+---------+---------+---------+--
PGP+Pt      6     7.700     6.614  (------------*------------)
PGP-Pt      5    11.440     3.788            (-------------*-------------)
                                    ----+---------+---------+---------+--
Pooled StDev =    5.539               4.0       8.0      12.0      16.0
```

One-way ANOVA: MRP+Pt, MRP-Pt

```
Analysis of Variance
Source      DF        SS        MS        F        P
Factor       1       209       209     0.37    0.557
Error        9      5065       563
Total       10      5274

                                      Individual 95% CIs For Mean
                                      Based on Pooled StDev
Level       N      Mean     StDev  --------+---------+---------+--------
MRP+Pt      6     21.43     27.77           (-------------*--------------)
MRP-Pt      5     12.68     17.37  (---------------*---------------)
                                    --------+---------+---------+--------
Pooled StDev =    23.72                     0        15        30
```

One-way ANOVA: Ag+Pr, Ag-Pr

```
Analysis of Variance
Source      DF        SS        MS        F        P
Factor       1     0.688     0.688     4.99    0.037
Error       21     2.897     0.138
Total       22     3.585

                                      Individual 95% CIs For Mean
                                      Based on Pooled StDev
Level       N      Mean     StDev  --------+---------+---------+--------
Ag+Pr      19    1.7537    0.3256   (----*-----)
Ag-Pr       4    2.2100    0.5743            (------------*------------)
                                    --------+---------+---------+--------
Pooled StDev =    0.3714                1.80      2.10      2.40
```

One-way ANOVA: PCNA+Pr, PCNA-Pr

```
Analysis of Variance
Source      DF        SS        MS        F        P
Factor       1       9.2       9.2     0.10    0.751
Error       21    1875.0      89.3
Total       22    1884.2

                                      Individual 95% CIs For Mean
                                      Based on Pooled StDev
Level       N      Mean     StDev  ---+---------+---------+---------+---
PCNA+Pr    19    18.379     9.818        (-------*------)
PCNA-Pr     4    20.050     6.826  (---------------*----------------)
                                    ---+---------+---------+---------+---
Pooled StDev =    9.449               12.0      18.0      24.0      30.0
```

One-way ANOVA: Ki+Pr, Ki-Pr

```
Analysis of Variance
Source      DF        SS        MS        F        P
Factor       1      77.9      77.9     1.53    0.230
Error       21    1072.5      51.1
Total       22    1150.4

                                      Individual 95% CIs For Mean
                                      Based on Pooled StDev
Level       N      Mean     StDev  ----------+---------+---------+------
Ki+Pr      19     7.705     7.532                    (-----*------)
Ki-Pr       4     2.850     4.139   (--------------*--------------)
                                    ----------+---------+---------+------
Pooled StDev =    7.147               0.0       5.0       10.0
```

One-way ANOVA: PGP+Pr, PGP-Pr

```
Analysis of Variance
Source      DF        SS        MS        F        P
Factor       1      17.5      17.5     0.42    0.526
Error       21     883.8      42.1
Total       22     901.3

                                      Individual 95% CIs For Mean
                                      Based on Pooled StDev
Level       N      Mean     StDev  -+---------+---------+---------+-----
PGP+Pr     19     8.147     6.783      (------*-------)
PGP-Pr      4    10.450     4.303  (----------------*----------------)
                                    -+---------+---------+---------+-----
Pooled StDev =    6.487          4.0       8.0       12.0      16.0
```

One-way ANOVA: MRP+Pr, MRP-Pr

```
Analysis of Variance
Source      DF        SS        MS        F        P
Factor       1       165       165     0.37    0.550
Error       21      9390       447
Total       22      9555

                                      Individual 95% CIs For Mean
                                      Based on Pooled StDev
Level       N      Mean     StDev  ----------+---------+---------+------
MRP+Pr     19     15.43     22.21      (--------*-------)
MRP-Pr      4     22.50     13.06  (------------------*-----------------)
                                    ----------+---------+---------+------
Pooled StDev =   21.15              12        24        36
```

One-way ANOVA: Ag+Pt, Ag-Pt

```
Analysis of Variance
Source      DF        SS        MS        F        P
Factor       1     0.011     0.011     0.10    0.754
Error        9     0.943     0.105
Total       10     0.954

                                      Individual 95% CIs For Mean
                                      Based on Pooled StDev
Level       N      Mean     StDev  --+---------+---------+---------+----
Ag+Pt       9    1.5833    0.2735         (-------*-------)
Ag-Pt       2    1.6650    0.5869  (-----------------*----------------)
                                    --+---------+---------+---------+----
Pooled StDev =   0.3236             1.20      1.50      1.80      2.10
```

One-way ANOVA: PCNA+Pt, PCNA-Pt

```
Analysis of Variance
Source      DF        SS        MS        F        P
Factor       1      17.9      17.9     0.33    0.582
Error        9     493.0      54.8
Total       10     510.9

                                    Individual 95% CIs For Mean
                                    Based on Pooled StDev
Level       N      Mean     StDev  ----+---------+---------+---------+--
PCNA+Pt     9    13.004     6.325               (-------*-------)
PCNA-Pt     2     9.700    13.152   (-----------------*-----------------)
                                    ----+---------+---------+---------+--
Pooled StDev =    7.401              0.0       7.0      14.0      21.0
```

One-way ANOVA: Ki+Pt, Ki-Pt

```
Analysis of Variance
Source      DF        SS        MS        F        P
Factor       1      3.01      3.01     1.76    0.217
Error        9     15.34      1.70
Total       10     18.35

                                    Individual 95% CIs For Mean
                                    Based on Pooled StDev
Level       N      Mean     StDev  -+---------+---------+---------+-----
Ki+Pt       9     2.156     1.326                      (-------*-------)
Ki-Pt       2     0.800     1.131  (-----------------*-----------------)
                                    -+---------+---------+---------+-----
Pooled StDev =    1.306          -1.2       0.0       1.2       2.4
```

One-way ANOVA: PGP+Pt, PGP-Pt

```
Analysis of Variance
Source      DF        SS        MS        F        P
Factor       1      68.7      68.7     2.52    0.147
Error        9     245.6      27.3
Total       10     314.2

                                    Individual 95% CIs For Mean
                                    Based on Pooled StDev
Level       N      Mean     StDev  ---+---------+---------+---------+---
PGP+Pt      9     8.222     5.522  (------*-----)
PGP-Pt      2    14.700     1.273      (-------------*------------)
                                    ---+---------+---------+---------+---
Pooled StDev =    5.224              6.0      12.0      18.0      24.0
```

One-way ANOVA: MRP+Pt, MRP-Pt

```
Analysis of Variance
Source      DF        SS        MS        F        P
Factor       1         3         3     0.01    0.942
Error        9      5270       586
Total       10      5274

                                    Individual 95% CIs For Mean
                                    Based on Pooled StDev
Level       N      Mean     StDev  ---------+---------+---------+-------
MRP+Pt      9     17.71     24.34           (------*------)
MRP-Pt      2     16.30     23.05  (---------------*--------------)
                                    ---------+---------+---------+-------
Pooled StDev =   24.20                      0        25        50
```

One-way ANOVA: AgIIPr, AgIIIPr, AgIVPr

```
Analysis of Variance
Source      DF        SS        MS        F        P
Factor       2     0.134     0.067     0.39    0.683
Error       20     3.451     0.173
Total       22     3.585

                                      Individual 95% CIs For Mean
                                      Based on Pooled StDev
Level        N      Mean     StDev  ----------+---------+---------+------
AgIIPr       5    1.9740    0.5149     (---------------*---------------)
AgIIIPr      8    1.8163    0.4547  (------------*-----------)
AgIVPr      10    1.7760    0.3238  (----------*----------)
                                     ----------+---------+---------+------
Pooled StDev =    0.4154                    1.75      2.00      2.25
```

One-way ANOVA: PCNAIIPr, PCNAIIIPr, PCNAIVPr

```
Analysis of Variance
Source      DF        SS        MS        F        P
Factor       2     110.5      55.2     0.62    0.546
Error       20    1773.7      88.7
Total       22    1884.2

                                      Individual 95% CIs For Mean
                                      Based on Pooled StDev
Level        N      Mean     StDev  -----+---------+---------+---------+-
PCNAIIPr     5    22.200    12.663        (--------------*--------------)
PCNAIIIP     8    16.225    10.738  (-----------*-----------)
PCNAIVPr    10    18.860     6.010       (---------*----------)
                                     -----+---------+---------+---------+-
Pooled StDev =    9.417               12.0      18.0      24.0      30.0
```

One-way ANOVA: KiIIPr, KiIIIPr, KiIVPr

```
Analysis of Variance
Source      DF        SS        MS        F        P
Factor       2     264.8     132.4     2.99    0.073
Error       20     885.6      44.3
Total       22    1150.4

                                      Individual 95% CIs For Mean
                                      Based on Pooled StDev
Level        N      Mean     StDev  ----+---------+---------+---------+--
KiIIPr       5    12.080    10.630                (---------*---------)
KiIIIPr      8     2.900     4.336   (-------*-------)
KiIVPr      10     7.420     5.793           (------*-------)
                                     ----+---------+---------+---------+--
Pooled StDev =    6.654               0.0       6.0      12.0      18.0
```

One-way ANOVA: PGPIIPr, PGPIIIPr, PGPIVPr

```
Analysis of Variance
Source      DF        SS        MS        F        P
Factor       2      56.1      28.1     0.66    0.526
Error       20     845.2      42.3
Total       22     901.3

                                      Individual 95% CIs For Mean
                                      Based on Pooled StDev
Level        N      Mean     StDev  -+---------+---------+---------+-----
PGPIIPr      5    5.600     4.357  (-----------*-----------)
PGPIIIPr     8    9.575     4.415             (--------*---------)
PGPIVPr     10    9.200     8.385             (-------*--------)
                                     -+---------+---------+---------+-----
Pooled StDev =    6.501          0.0       5.0      10.0      15.0
```

One-way ANOVA: MRPIIPr, MRPIIIPr, MRPIVPr

```
Analysis of Variance
Source     DF        SS        MS        F        P
Factor      2       414       207     0.45    0.642
Error      20      9141       457
Total      22      9555

                                        Individual 95% CIs For Mean
                                        Based on Pooled StDev
Level       N      Mean     StDev  --------+---------+---------+--------
MRPIIPr     5      8.84     12.76   (------------*------------)
MRPIIIPr    8     17.55     14.36            (----------*---------)
MRPIVPr    10     19.86     27.98               (--------*---------)
                                   --------+---------+---------+--------
Pooled StDev =    21.38                     0        15        30
```

One-way ANOVA: AgIIIPt, AgIVPt

```
Analysis of Variance
Source     DF        SS        MS        F        P
Factor      1    0.005     0.005     0.05    0.829
Error       9    0.948     0.105
Total      10    0.954

                                        Individual 95% CIs For Mean
                                        Based on Pooled StDev
Level       N      Mean     StDev  -------+---------+---------+---------
AgIIIPt     5    1.6220    0.4201    (---------------*----------------)
AgIVPt      6    1.5783    0.2201   (--------------*--------------)
                                   -------+---------+---------+---------
Pooled StDev =    0.3246                1.40      1.60      1.80
```

One-way ANOVA: PCNAIIIPt, PCNAIVPt

```
Analysis of Variance
Source     DF        SS        MS        F        P
Factor      1     158.3     158.3     4.04    0.075
Error       9     352.6      39.2
Total      10     510.9

                                        Individual 95% CIs For Mean
                                        Based on Pooled StDev
Level       N      Mean     StDev  -------+---------+---------+---------
PCNAIIIP    5     8.248     8.337  (----------*---------)
PCNAIVPt    6    15.867     3.861               (--------*---------)
                                   -------+---------+---------+---------
Pooled StDev =    6.259                6.0      12.0      18.0
```

One-way ANOVA: KiIIIPt, KiIVPt

```
Analysis of Variance
Source     DF        SS        MS        F        P
Factor      1      3.63      3.63     2.22    0.171
Error       9     14.72      1.64
Total      10     18.35

                                        Individual 95% CIs For Mean
                                        Based on Pooled StDev
Level       N      Mean     StDev  -+---------+---------+---------+-----
KiIIIPt     5     1.280     0.944   (------------*------------)
KiIVPt      6     2.433     1.494               (----------*-----------)
                                   -+---------+---------+---------+-----
Pooled StDev =    1.279           0.0       1.0       2.0       3.0
```

One-way ANOVA: PGPIIIPt, PGPIVPt

```
Analysis of Variance
Source      DF        SS        MS        F        P
Factor       1      38.1      38.1     1.24    0.294
Error        9     276.1      30.7
Total       10     314.2

                                      Individual 95% CIs For Mean
                                      Based on Pooled StDev
Level        N      Mean     StDev  ----+---------+---------+---------+--
PGPIIIPt     5    11.440     3.788            (-------------*-------------)
PGPIVPt      6     7.700     6.614  (------------*------------)
                                    ----+---------+---------+---------+--
Pooled StDev =     5.539              4.0       8.0      12.0      16.0
```

One-way ANOVA: MRPIIIPt, MRPIVPt

```
Analysis of Variance
Source      DF        SS        MS        F        P
Factor       1       209       209     0.37    0.557
Error        9      5065       563
Total       10      5274

                                      Individual 95% CIs For Mean
                                      Based on Pooled StDev
Level        N      Mean     StDev  --------+---------+---------+--------
MRPIIIPt     5     12.68     17.37  (---------------*---------------)
MRPIVPt      6     21.43     27.77          (-------------*--------------)
                                    --------+---------+---------+--------
Pooled StDev =    23.72                     0        15        30
```

One-way ANOVA: AgaPr, AgbPR

```
Analysis of Variance
Source      DF        SS        MS        F        P
Factor       1     0.085     0.085     0.51    0.483
Error       21     3.500     0.167
Total       22     3.585

                                      Individual 95% CIs For Mean
                                      Based on Pooled StDev
Level        N      Mean     StDev  --+---------+---------+---------+----
AgaPr       15    1.7887    0.3884  (----------*----------)
AgbPR        8    1.9163    0.4454     (--------------*--------------)
                                    --+---------+---------+---------+----
Pooled StDev =    0.4083             1.60      1.80      2.00      2.20
```

One-way ANOVA: PCNAaPr, PCNAbPr

```
Analysis of Variance
Source      DF        SS        MS        F        P
Factor       1      41.1      41.1     0.47    0.501
Error       21    1843.1      87.8
Total       22    1884.2

                                      Individual 95% CIs For Mean
                                      Based on Pooled StDev
Level        N      Mean     StDev  ---------+---------+---------+-------
PCNAaPr     15    17.693     9.442   (-----------*-----------)
PCNAbPr      8    20.500     9.219     (----------------*----------------)
                                    ---------+---------+---------+-------
Pooled StDev =    9.368              16.0      20.0      24.0
```

One-way ANOVA: KiaPr, KibPr

```
Analysis of Variance
Source      DF        SS        MS        F        P
Factor       1       1.6       1.6     0.03    0.866
Error       21    1148.8      54.7
Total       22    1150.4

                                      Individual 95% CIs For Mean
                                      Based on Pooled StDev
Level       N      Mean     StDev  -------+---------+---------+---------
KiaPr      15     7.053     8.142         (-------------*------------)
KibPr       8     6.500     5.615   (-----------------*-----------------)
                                    -------+---------+---------+---------
Pooled StDev =    7.396               3.0       6.0       9.0
```

One-way ANOVA: PGPaPr, PGPbPr

```
Analysis of Variance
Source      DF        SS        MS        F        P
Factor       1      31.3      31.3     0.76    0.394
Error       21     870.0      41.4
Total       22     901.3

                                      Individual 95% CIs For Mean
                                      Based on Pooled StDev
Level       N      Mean     StDev  ---+---------+---------+---------+---
PGPaPr     15     9.400     7.216                (----------*----------)
PGPbPr      8     6.950     4.487  (---------------*---------------)
                                    ---+---------+---------+---------+---
Pooled StDev =    6.436              3.0       6.0       9.0      12.0
```

One-way ANOVA: MRPaPr, MRPbPr

```
Analysis of Variance
Source      DF        SS        MS        F        P
Factor       1       296       296     0.67    0.422
Error       21      9259       441
Total       22      9555

                                      Individual 95% CIs For Mean
                                      Based on Pooled StDev
Level       N      Mean     StDev  --------+---------+---------+--------
MRPaPr     15     14.04     16.62   (----------*----------)
MRPbPr      8     21.58     27.75      (---------------*--------------)
                                    --------+---------+---------+--------
Pooled StDev =   21.00               10        20        30
```

One-way ANOVA: AgaPt, AgbPt

```
Analysis of Variance
Source      DF        SS        MS        F        P
Factor       1    0.1316    0.1316     1.44    0.261
Error        9    0.8220    0.0913
Total       10    0.9536

                                      Individual 95% CIs For Mean
                                      Based on Pooled StDev
Level       N      Mean     StDev  --+---------+---------+---------+----
AgaPt       6    1.4983    0.3078   (----------*----------)
AgbPt       5    1.7180    0.2951          (-----------*-----------)
                                    --+---------+---------+---------+----
Pooled StDev =   0.3022             1.25      1.50      1.75      2.00
```

One-way ANOVA: PCNAaPt, PCNAbPt

```
Analysis of Variance
Source      DF        SS        MS        F        P
Factor       1      44.5      44.5     0.86    0.378
Error        9     466.3      51.8
Total       10     510.9

                                      Individual 95% CIs For Mean
                                      Based on Pooled StDev
Level        N      Mean     StDev  ---+---------+---------+---------+---
PCNAaPt      6    10.567     8.684   (------------*------------)
PCNAbPt      5    14.608     4.724          (-------------*--------------)
                                     ---+---------+---------+---------+---
Pooled StDev =    7.198               5.0       10.0      15.0      20.0
```

One-way ANOVA: KiaPt, KibPt

```
Analysis of Variance
Source      DF        SS        MS        F        P
Factor       1      1.00      1.00     0.52    0.489
Error        9     17.35      1.93
Total       10     18.35

                                      Individual 95% CIs For Mean
                                      Based on Pooled StDev
Level        N      Mean     StDev  -------+---------+---------+---------
KiaPt        6    1.633     1.477   (-----------*-----------)
KibPt        5    2.240     1.268       (-------------*-------------)
                                     -------+---------+---------+---------
Pooled StDev =    1.388                 1.0       2.0       3.0
```

One-way ANOVA: PGPaPt, PGPbPt

```
Analysis of Variance
Source      DF        SS        MS        F        P
Factor       1       4.8       4.8     0.14    0.719
Error        9     309.5      34.4
Total       10     314.2

                                      Individual 95% CIs For Mean
                                      Based on Pooled StDev
Level        N      Mean     StDev  ---+---------+---------+---------+---
PGPaPt       6    10.000     6.185        (---------------*--------------)
PGPbPt       5     8.680     5.436   (----------------*----------------)
                                     ---+---------+---------+---------+---
Pooled StDev =    5.864               3.5       7.0       10.5      14.0
```

One-way ANOVA: MRPaPt, MRPbPt

```
Analysis of Variance
Source      DF        SS        MS        F        P
Factor       1      1908      1908     5.10    0.050
Error        9      3366       374
Total       10      5274

                                      Individual 95% CIs For Mean
                                      Based on Pooled StDev
Level        N      Mean     StDev  -------+---------+---------+---------
MRPaPt       6      5.43     13.31   (--------*--------)
MRPbPt       5     31.88     24.90                (---------*---------)
                                     -------+---------+---------+---------
Pooled StDev =    19.34                    0        20        40
```

One-way ANOVA: AgHNPr, AgTPr, AgEPr, AGIPr

```
Analysis of Variance
Source      DF        SS        MS        F        P
Factor       3     0.174     0.058     0.41    0.747
Error       29     4.107     0.142
Total       32     4.281

                                      Individual 95% CIs For Mean
                                      Based on Pooled StDev
Level        N      Mean     StDev  ---------+---------+---------+-------
AgHNPr       4    1.6800    0.1433   (--------------*---------------)
AgTPr       13    1.8069    0.4465              (-------*--------)
AgEPr        8    1.7788    0.2792          (----------*----------)
AGIPr        8    1.9213    0.3978                (----------*----------)
                                      ---------+---------+---------+-------
Pooled StDev =    0.3763                    1.50      1.75      2.00
```

One-way ANOVA: PCNAHNPr, PCNATPr, PCNAEPr, PCNAIPr

```
Analysis of Variance
Source      DF        SS        MS        F        P
Factor       3     161.7      53.9     0.56    0.644
Error       29    2776.1      95.7
Total       32    2937.9

                                      Individual 95% CIs For Mean
                                      Based on Pooled StDev
Level        N      Mean     StDev  --------+---------+---------+--------
PCNAHNPr     4    17.800     7.045   (-----------------*----------------)
PCNATPr     13    17.092     7.952         (--------*---------)
PCNAEPr      8    16.175    11.340     (------------*------------)
PCNAIPr      8    21.950    11.762               (------------*-----------)
                                      --------+---------+---------+--------
Pooled StDev =    9.784                    12.0      18.0      24.0
```

One-way ANOVA: KiHNPr, KiTPr, KiEPr, KiIPr

```
Analysis of Variance
Source      DF        SS        MS        F        P
Factor       3     234.0      78.0     1.84    0.161
Error       29    1226.6      42.3
Total       32    1460.6

                                      Individual 95% CIs For Mean
                                      Based on Pooled StDev
Level        N      Mean     StDev  ---+---------+---------+---------+---
KiHNPr       4    12.000    11.031              (----------*----------)
KiTPr       13     7.000     6.057          (-----*-----)
KiEPr        8     4.550     5.845     (-------*------)
KiIPr        8     3.250     5.101   (------*-------)
                                      ---+---------+---------+---------+---
Pooled StDev =    6.504                 0.0       6.0      12.0      18.0
```

One-way ANOVA: PGPHNPr, PGPTPr, PGPEPr, PGPIPr

```
Analysis of Variance
Source      DF        SS        MS        F        P
Factor       3      59.3      19.8     0.57    0.641
Error       29    1012.6      34.9
Total       32    1072.0

                                      Individual 95% CIs For Mean
                                      Based on Pooled StDev
Level        N      Mean     StDev  -----+---------+---------+---------+-
PGPHNPr      4    10.300     2.436        (---------------*---------------)
PGPTPr      13     8.062     5.425         (-------*--------)
PGPEPr       8     9.750     8.558           (---------*----------)
PGPIPr       8     6.500     4.292   (---------*----------)
                                      -----+---------+---------+---------+-
Pooled StDev =    5.909                   4.0       8.0      12.0      16.0
```

One-way ANOVA: MRPHNPr, MRPTPr, MRPEPr, MRPIPr

```
Analysis of Variance
Source      DF        SS        MS        F        P
Factor       3       651       217     0.48    0.698
Error       29     13074       451
Total       32     13725

                                      Individual 95% CIs For Mean
                                      Based on Pooled StDev
Level       N      Mean     StDev  --+---------+---------+---------+----
MRPHNPr     4      4.15      4.91  (--------------*-------------)
MRPTPr     13     18.42     20.62                  (-------*-------)
MRPEPr      8     16.70     23.48                (---------*---------)
MRPIPr      8     17.10     24.02                (---------*----------)
                                    --+---------+---------+---------+----
Pooled StDev =    21.23             -15         0        15        30
```

One-way ANOVA: AgHNPt, AgTPt, AgEPt, AgIPt

```
Analysis of Variance
Source      DF        SS        MS        F        P
Factor       3    0.1562    0.0521     0.55    0.656
Error       14    1.3251    0.0947
Total       17    1.4813

                                      Individual 95% CIs For Mean
                                      Based on Pooled StDev
Level       N      Mean     StDev  -------+---------+---------+---------
AgHNPt      3    1.3833    0.1193  (------------*------------)
AgTPt       7    1.5857    0.3141              (-------*-------)
AgEPt       5    1.5400    0.3365          (---------*---------)
AgIPt       3    1.6967    0.3547             (------------*-----------)
                                    -------+---------+---------+---------
Pooled StDev =    0.3077               1.20      1.50      1.80
```

One-way ANOVA: PCNAHNPt, PCNATPt, PCNAEPt, PCNAIPt

```
Analysis of Variance
Source      DF        SS        MS        F        P
Factor       3     189.2      63.1     1.31    0.311
Error       14     675.3      48.2
Total       17     864.4

                                      Individual 95% CIs For Mean
                                      Based on Pooled StDev
Level       N      Mean     StDev  -+---------+---------+---------+-----
PCNAHNPt    3     8.200     7.074  (----------*----------)
PCNATPt     7    12.006     6.701           (------*------)
PCNAEPt     5     8.208     8.403     (-------*--------)
PCNAIPt     3    17.333     3.420               (----------*---------)
                                    -+---------+---------+---------+-----
Pooled StDev =    6.945           0.0       8.0      16.0      24.0
```

One-way ANOVA: KiHNPt, KiTPt, KiEPt, KiIPt

```
Analysis of Variance
Source      DF        SS        MS        F        P
Factor       3      4.89      1.63     1.14    0.366
Error       14     19.98      1.43
Total       17     24.87

                                      Individual 95% CIs For Mean
                                      Based on Pooled StDev
Level       N      Mean     StDev  ----+---------+---------+---------+--
KiHNPt      3    1.467     0.231      (-----------*-----------)
KiTPt       7    1.714     1.076            (-------*-------)
KiEPt       5    2.520     1.316                 (---------*---------)
KiIPt       3    1.000     1.732  (-----------*-----------)
                                    ----+---------+---------+---------+--
Pooled StDev =    1.195             0.0       1.2       2.4       3.6
```

One-way ANOVA: PGPHNPt, PGPTPt, PGPEPt, PGPIPt

```
Analysis of Variance
Source      DF        SS        MS        F        P
Factor       3      43.5      14.5     0.45    0.719
Error       14     447.9      32.0
Total       17     491.4

                                      Individual 95% CIs For Mean
                                      Based on Pooled StDev
Level       N      Mean     StDev  ----------+---------+---------+------
PGPHNPt     3     7.400     7.831   (-------------*-------------)
PGPTPt      7     7.800     5.303         (---------*--------)
PGPEPt      5    11.240     5.096               (---------*----------)
PGPIPt      3     9.467     5.132        (-------------*-------------)
                                      ----------+---------+---------+------
Pooled StDev =    5.656                      5.0       10.0       15.0
```

One-way ANOVA: MRPHNPt, MRPTPt, MRPEPt, MRPIPt

```
Analysis of Variance
Source      DF        SS        MS        F        P
Factor       3       973       324     0.80    0.516
Error       14      5698       407
Total       17      6671

                                      Individual 95% CIs For Mean
                                      Based on Pooled StDev
Level       N      Mean     StDev  ---+---------+---------+---------+---
MRPHNPt     3      0.00      0.00   (-----------*-----------)
MRPTPt      7     20.29     27.01                (-------*-------)
MRPEPt      5      9.64     14.02          (---------*--------)
MRPIPt      3     16.67     16.31           (-----------*-----------)
                                      ---+---------+---------+---------+---
Pooled StDev =    20.17                -20         0        20        40
```

ประวัติผู้ขียนวิทยานิพนธ์

สพญ. วิยะดา ศรีชาติ เกิดวันที่ 3 มิถุนายน พ.ศ. 2521 ที่จังหวัดกาฬสินธุ์ สำเร็จการศึกษาปริญญาตรีสัตวแพทยศาสตรบัณฑิต เกียรตินิยมอันดับสอง คณะสัตวแพทยศาสตร์ มหาวิทยาลัยขอนแก่น ทำงานในตำแหน่งสัตวแพทย์ประจำโรงพยาบาลสัตว์เอกชน เป็นระยะเวลา 2 ปี และได้เข้าศึกษาต่อในหลักสูตรวิทยาศาสตรมหาบัณฑิต สาขาพยาธิวิทยาทางสัตวแพทย์ ภาควิชาพยาธิวิทยา คณะสัตวแพทยศาสตร์ จุฬาลงกรณ์มหาวิทยาลัย เมื่อปี พ.ศ. 2547