# Elective Surgery Schedule Solution

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# QUESTIONS

1. **Think of multiple ways that the creation of a predictive model can be helpful in this context.**
2. Conduct quant analysis to determine
   a. Whether # scheduled cases is predictive of final case volume
   b. Whether predictive power changes as surgery date nears
   c. Is volume different across days of the week?
3. Most helpful predictive model
4. Sample dashboard

# QUESTION 1: UTILITY OF MODEL

**Operational improvement**

- Improved efficiency (not over- or under-staffed)
- The right equipment and rooms available
- Revenue forecasting for budgeting purposes
- Surgical equipment demand and ordering cycles

**Morale improvement**

**Labor Relations / Compliance**

# QUESTION 2+3

1. Think of multiple ways that the creation of a predictive model can be helpful in this context.
2. **Conduct quant analysis to determine**
    a. **Whether # scheduled cases is predictive of final case volume**
    b. **Whether predictive power changes as surgery date nears**
    c. **Is volume different across days of the week?**
3. **Most helpful predictive model**
4. Sample dashboard

# QUESTION 2

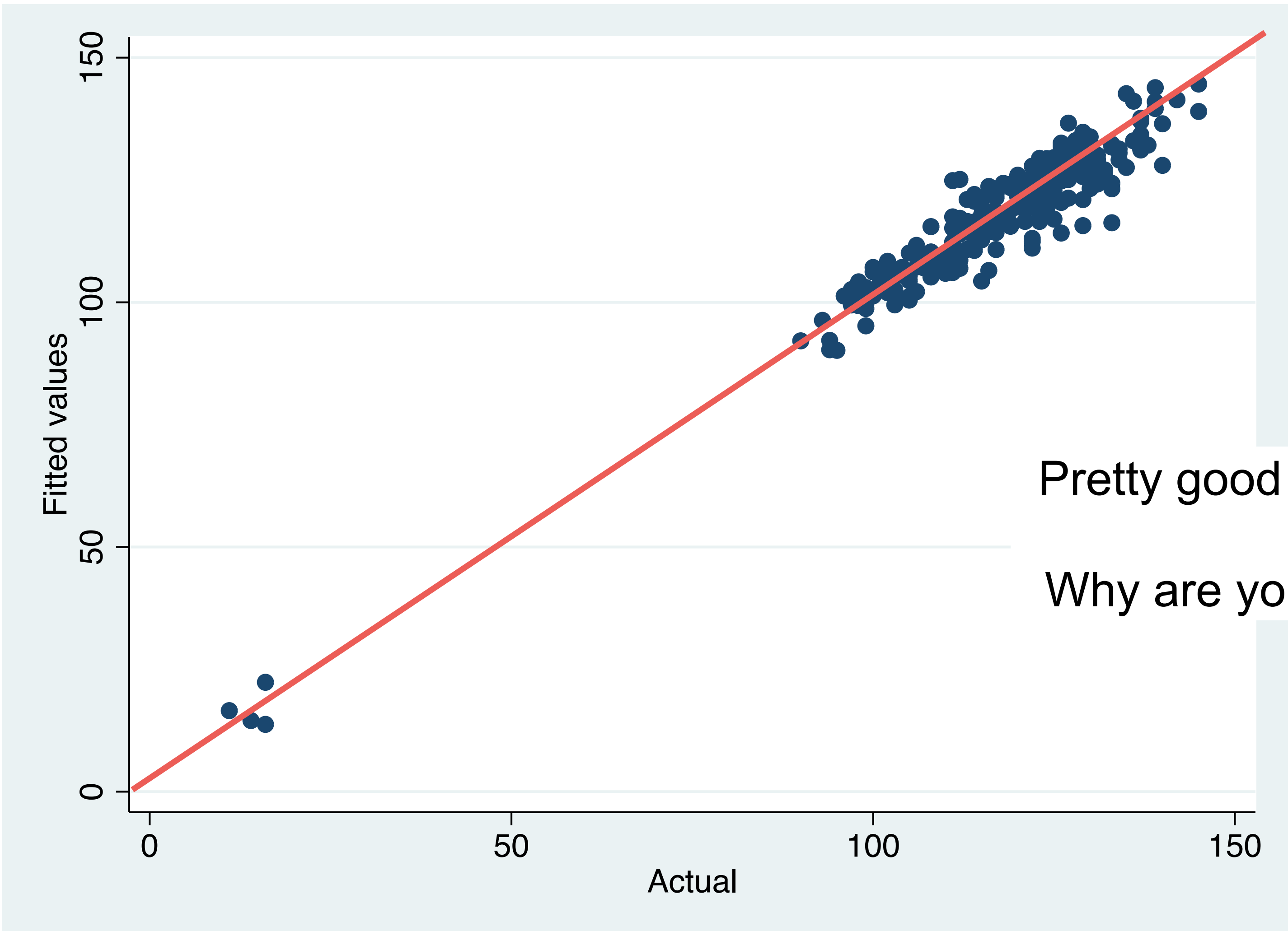
```
. reg actual t28 t21 t14 t13 t12 t11 t10 t9 t8 t7 t6 t5 t4 t3 t2 t1

      Source |       SS           df       MS      Number of obs   =       241
-------------+----------------------------------   F(16, 224)      =    197.60
       Model |  69655.7965        16  4353.48728   Prob > F        =    0.0000
    Residual |  4935.08319       224  22.0316214   R-squared       =    0.9338
-------------+----------------------------------   Adj R-squared   =    0.9291
       Total |  74590.8797       240  310.795332   Root MSE        =    4.6938

------------------------------------------------------------------------------
      actual |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         t28 |  -.0384949   .0757068    -0.51   0.612    -.1876836    .1106937
         t21 |   .0889465   .0799785     1.11   0.267    -.0686601     .246553
         t14 |  -.1000675   .1201409    -0.83   0.406    -.3368185    .1366835
         t13 |    .099317   .1806372     0.55   0.583    -.2566486    .4552825
         t12 |   .0466123   .2051393     0.23   0.820    -.3576375    .4508622
         t11 |  -.1749222   .2014459    -0.87   0.386    -.5718937    .2220494
         t10 |   .0169209   .1605497     0.11   0.916      -.29946    .3333018
          t9 |   .1089836   .1431402     0.76   0.447      -.17309    .3910572
          t8 |    .009978   .1451936     0.07   0.945     -.276142     .296098
          t7 |   .1472039   .1708206     0.86   0.390    -.1894171    .4838249
          t6 |  -.1387719   .1845997    -0.75   0.453    -.5025461    .2250024
          t5 |  -.0474666   .1743055    -0.27   0.786    -.3909548    .2960217
          t4 |   .0812244    .174596     0.47   0.642    -.2628363    .4252852
          t3 |   -.162698   .1517318    -1.07   0.285    -.4617023    .1363063
          t2 |   .1287132   .1314298     0.98   0.328    -.1302837    .3877101
          t1 |   .9121406    .073297    12.44   0.000     .7677007    1.056581
       _cons |   10.87555   1.963297     5.54   0.000     7.006653    14.74444
------------------------------------------------------------------------------

. predict predsurgeries
(option xb assumed; fitted values)

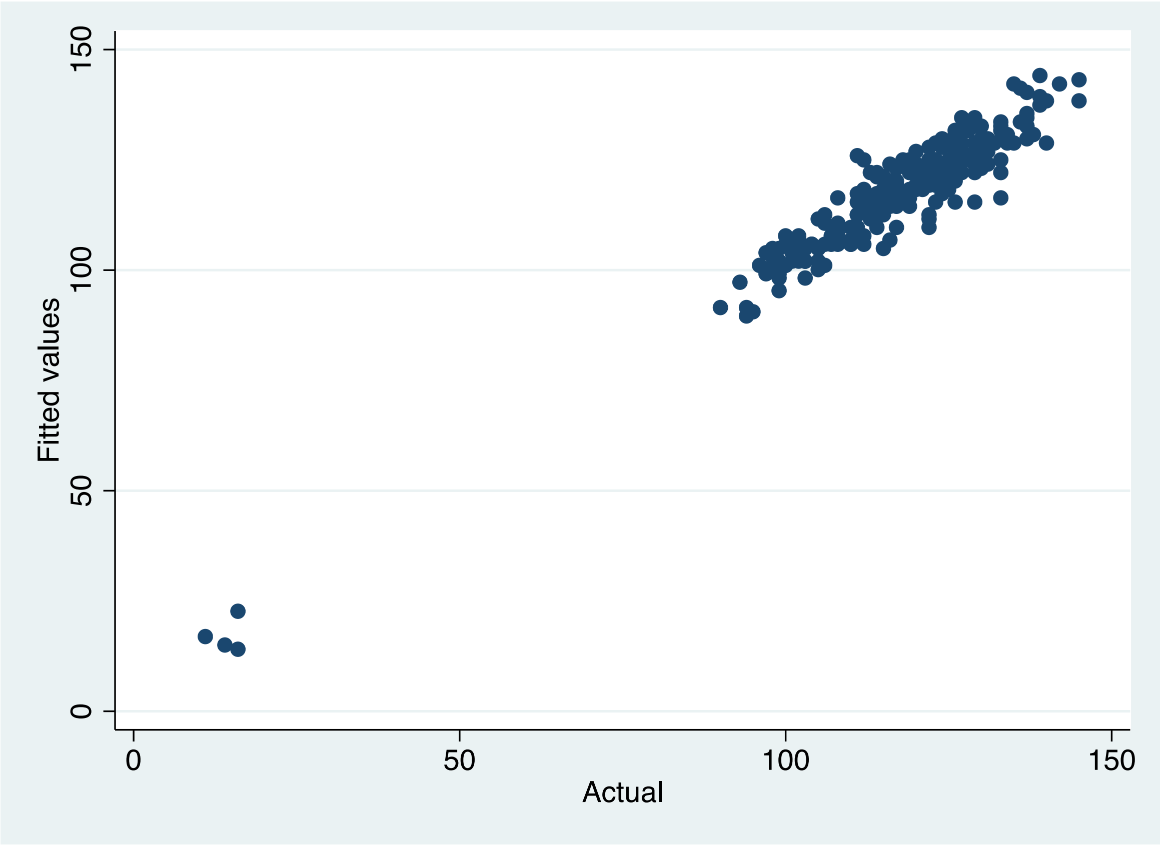
. scatter predsurgeries actual
```




Pretty good prediction, huh?

Why are you not surprised?

$$actual = a + b * t1$$



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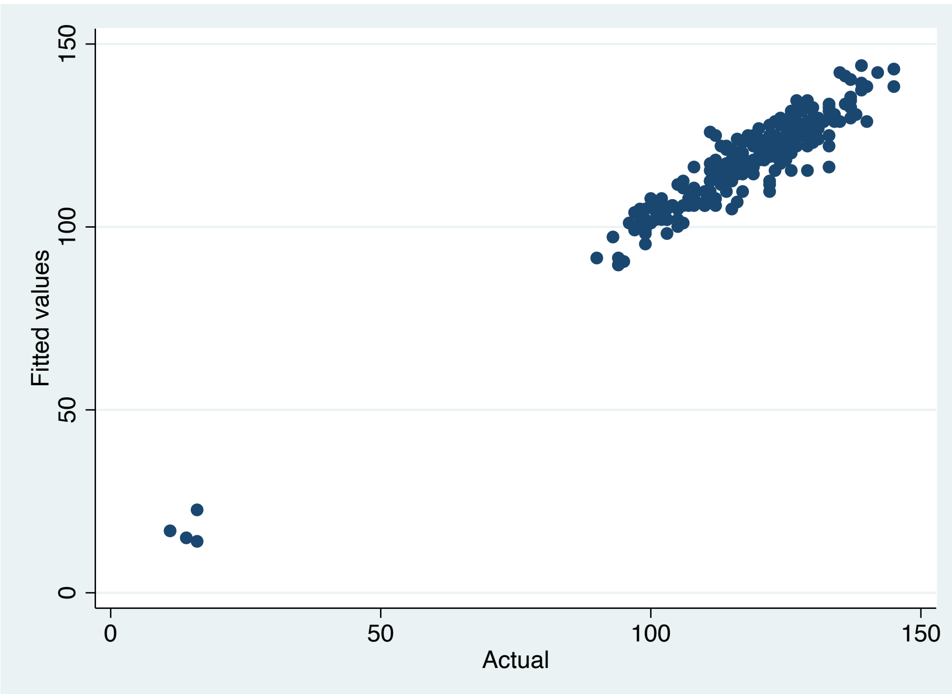
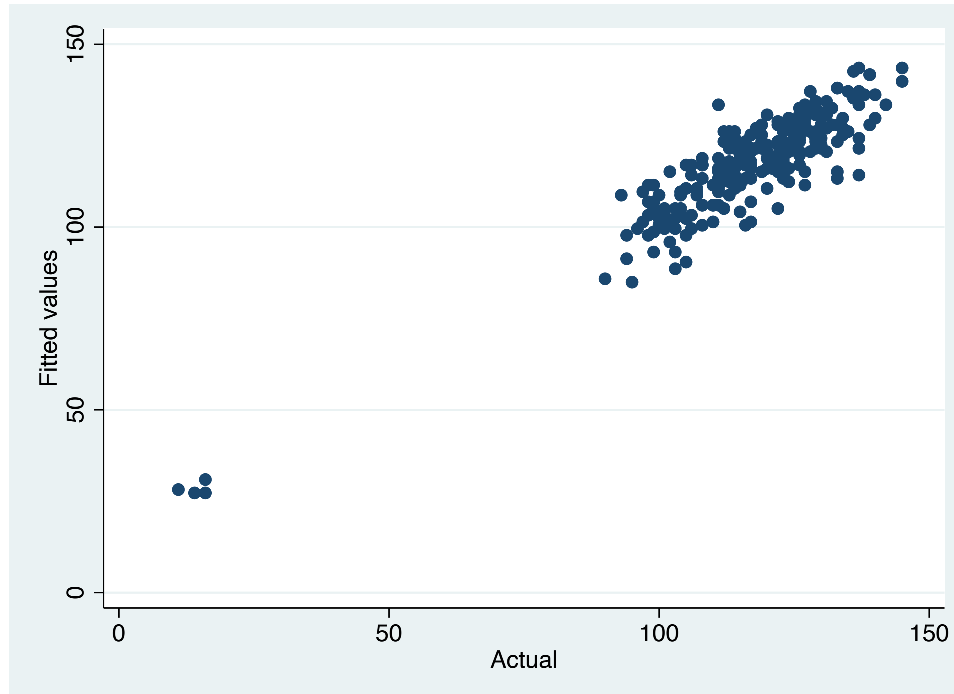
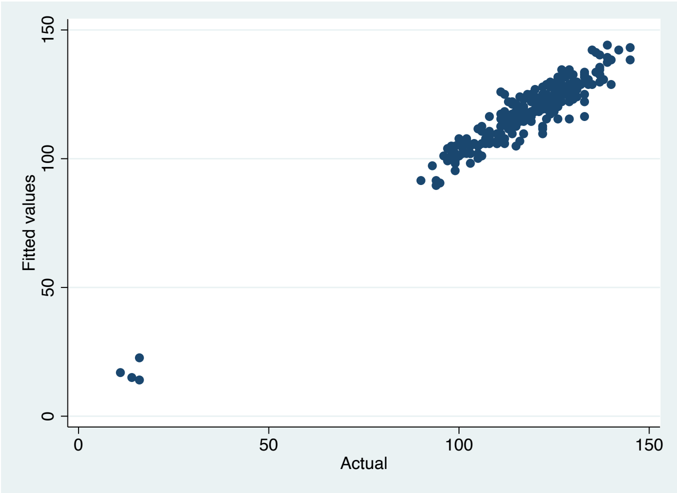


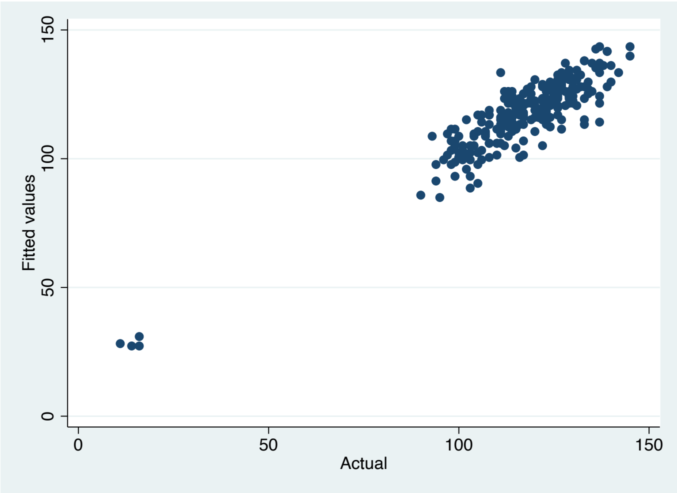

$$actual = a + b * t3$$



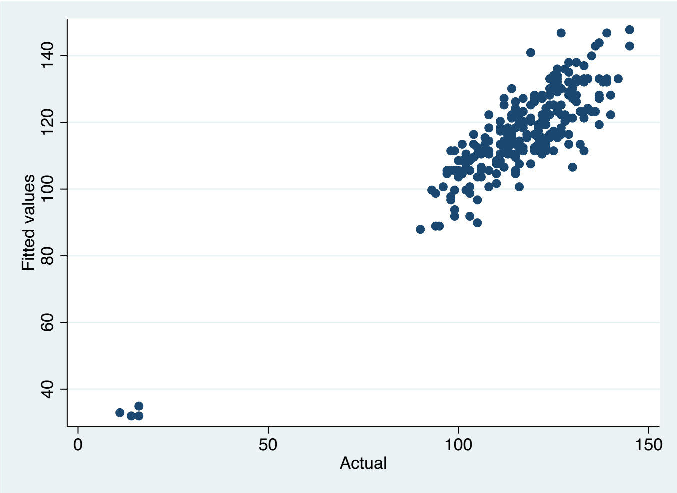
$$actual = a + b * t1$$



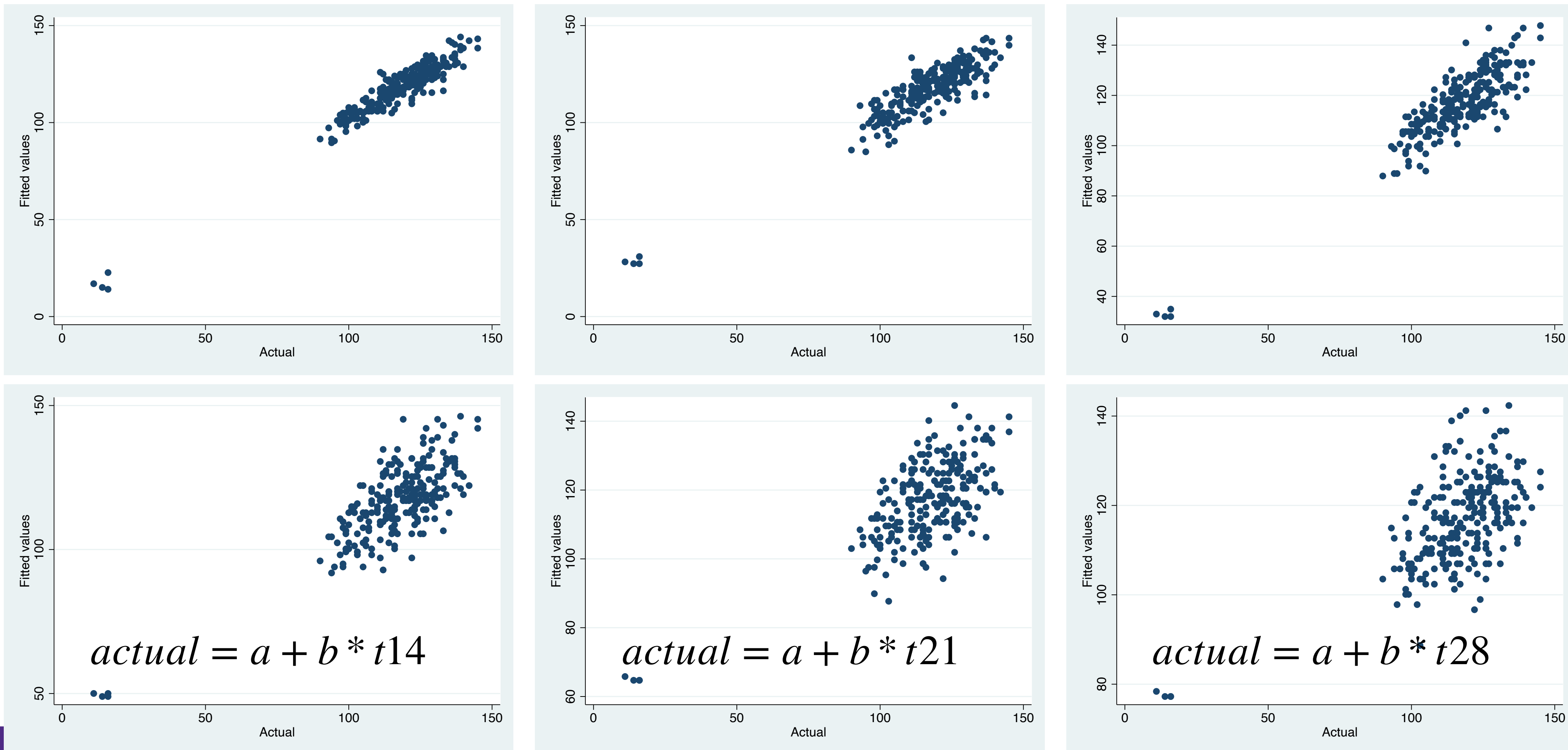

$$actual = a + b * t3$$




$$actual = a + b * t7$$



$actual = a + b * t1$ $actual = a + b * t3$ $actual = a + b * t7$



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          t6 |  -.1387719   .1845997    -0.75   0.453    -.5025461    .2250024
          t5 |  -.0474666   .1743055    -0.27   0.786    -.3909548    .2960217
          t4 |   .0812244    .174596     0.47   0.642    -.2628363    .4252852
          t3 |   -.162698   .1517318    -1.07   0.285    -.4617023    .1363063
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          t1 |   .9121406    .073297    12.44   0.000     .7677007    1.056581
       _cons |   10.87555   1.963297     5.54   0.000     7.006653    14.74444
------------------------------------------------------------------------------

. predict predsurgeries
(option xb assumed; fitted values)

. scatter predsurgeries actual
```

**Strength:** high predictive accuracy

**Weakness:** can't reasonably interpret interpret coefficients.  *WHY?*

*High correlations among independent variables = fine for prediction, bad for interpretation.*

**Strength:** high predictive accuracy

**Weakness:** can't reasonably interpret interpret coefficients. *WHY?*

```
. corr t1 t2 t3 t4 t5 t6 t7 t8 t9 t10 t11 t12 t13 t14 t21 t28
(obs=241)
```

| | t1 | t2 | t3 | t4 | t5 | t6 | t7 | t8 | t9 | t10 | t11 | t12 | t13 | t14 | t21 | t28 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| t1 | 1.0000 | | | | | | | | | | | | | | | |
| t2 | 0.9701 | 1.0000 | | | | | | | | | | | | | | |
| t3 | 0.9509 | 0.9831 | 1.0000 | | | | | | | | | | | | | |
| t4 | 0.9431 | 0.9688 | 0.9842 | 1.0000 | | | | | | | | | | | | |
| t5 | 0.9373 | 0.9597 | 0.9643 | 0.9849 | 1.0000 | | | | | | | | | | | |
| t6 | 0.9280 | 0.9506 | 0.9466 | 0.9632 | 0.9840 | 1.0000 | | | | | | | | | | |
| t7 | 0.9181 | 0.9343 | 0.9255 | 0.9384 | 0.9600 | 0.9845 | 1.0000 | | | | | | | | | |
| t8 | 0.9092 | 0.9277 | 0.9203 | 0.9301 | 0.9483 | 0.9692 | 0.9848 | 1.0000 | | | | | | | | |
| t9 | 0.8951 | 0.9229 | 0.9245 | 0.9258 | 0.9334 | 0.9457 | 0.9551 | 0.9715 | 1.0000 | | | | | | | |
| t10 | 0.8712 | 0.9080 | 0.9262 | 0.9280 | 0.9222 | 0.9186 | 0.9122 | 0.9352 | 0.9733 | 1.0000 | | | | | | |
| t11 | 0.8519 | 0.8857 | 0.9089 | 0.9239 | 0.9203 | 0.9065 | 0.8965 | 0.9181 | 0.9478 | 0.9793 | 1.0000 | | | | | |
| t12 | 0.8474 | 0.8770 | 0.8939 | 0.9110 | 0.9194 | 0.9128 | 0.9041 | 0.9222 | 0.9415 | 0.9621 | 0.9866 | 1.0000 | | | | |
| t13 | 0.8350 | 0.8627 | 0.8706 | 0.8783 | 0.8956 | 0.9120 | 0.9144 | 0.9311 | 0.9404 | 0.9416 | 0.9550 | 0.9773 | 1.0000 | | | |
| t14 | 0.8215 | 0.8481 | 0.8457 | 0.8460 | 0.8635 | 0.8901 | 0.9005 | 0.9199 | 0.9248 | 0.9134 | 0.9188 | 0.9404 | 0.9756 | 1.0000 | | |
| t21 | 0.7184 | 0.7430 | 0.7637 | 0.7662 | 0.7668 | 0.7713 | 0.7693 | 0.7946 | 0.8074 | 0.8219 | 0.8397 | 0.8491 | 0.8625 | 0.8714 | 1.0000 | |
| t28 | 0.6294 | 0.6550 | 0.6861 | 0.6855 | 0.6797 | 0.6694 | 0.6699 | 0.6979 | 0.7186 | 0.7443 | 0.7697 | 0.7643 | 0.7613 | 0.7670 | 0.8947 | 1.0000 |

```
. reg actual t1

      Source |       SS           df       MS      Number of obs   =       241
-------------+----------------------------------   F(1, 239)       =   3209.67
       Model |  69421.576         1   69421.576   Prob > F        =    0.0000
    Residual |  5169.30372       239  21.6288858   R-squared       =    0.9307
-------------+----------------------------------   Adj R-squared   =    0.9304
       Total |  74590.8797       240  310.795332   Root MSE        =    4.6507

------------------------------------------------------------------------------
      actual |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
          t1 |   .9562828   .0168794    56.65   0.000     .9230315    .9895341
       _cons |    11.1827   1.880881     5.95   0.000     7.477477    14.88792
------------------------------------------------------------------------------
```

*With only 1 IV, we can say… for every additional surgery that is scheduled the day prior, we see an additional 0.96 actual surgeries.*

```
. reg actual t1 t2

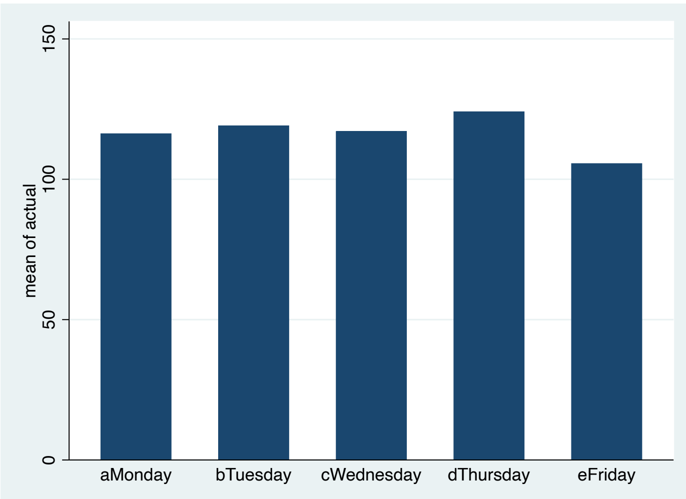
      Source |       SS           df       MS      Number of obs   =       241
-------------+----------------------------------   F(2, 238)       =   1598.26
       Model |  69422.0074         2  34711.0037   Prob > F        =    0.0000
    Residual |  5168.87223       238  21.7179505   R-squared       =    0.9307
-------------+----------------------------------   Adj R-squared   =    0.9301
       Total |  74590.8797       240  310.795332   Root MSE        =    4.6603

------------------------------------------------------------------------------
      actual |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
          t1 |   .9467596   .0696475    13.59   0.000     .8095553    1.083964
          t2 |   .0099502   .0705924     0.14   0.888    -.1291155     .149016
       _cons |    11.2237   1.907065     5.89   0.000     7.466817    14.98058
------------------------------------------------------------------------------
```

*Here, with 2 highly correlated IVs…*

*We **CAN** have a great prediction*
*We **can NOT** reasonably say "every additional surgery 2 days before only leads to an additional .0099 actual surgeries."*

# DOES DAY OF WEEK MATTER?




```
. tab dow1, sum(actual)
```

| dow1 | Summary of Actual Mean | Std. Dev. | Freq. |
|---|---|---|---|
| aMonday | 116.25532 | 18.456138 | 47 |
| bTuesday | 119.08163 | 10.864385 | 49 |
| cWednesday | 117.04167 | 11.240047 | 48 |
| dThursday | 124.08333 | 10.379672 | 48 |
| eFriday | 105.61224 | 26.357175 | 49 |
| Total | 116.38174 | 17.629388 | 241 |

```
. oneway actual dow1
```

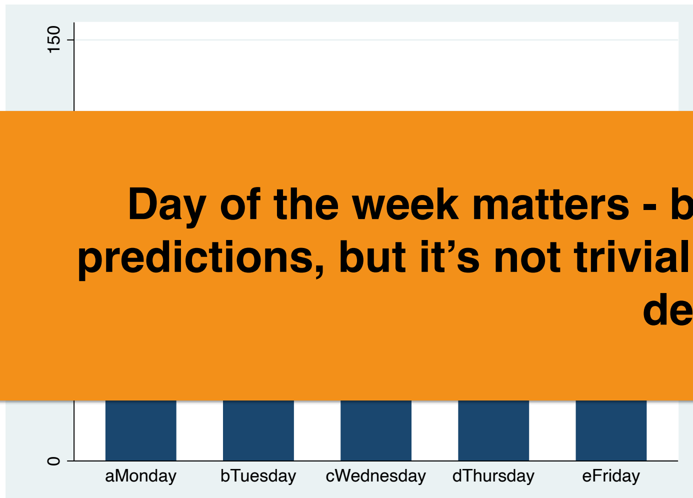
Analysis of Variance

| Source | SS | df | MS | F | Prob > F |
|---|---|---|---|---|---|
| Between groups | 8909.05404 | 4 | 2227.26351 | 8.00 | 0.0000 |
| Within groups | 65681.8256 | 236 | 278.31282 | | |
| Total | 74590.8797 | 240 | 310.795332 | | |

Bartlett's test for equal variances: chi2(4) = 69.1103 Prob>chi2 = 0.000

We can confidently reject the null that all days are the same

# DOES DAY OF WEEK MATTER?




```
. tab dow1, sum(actual)
```

| | Summary of Actual | | |
|---|---|---|---|
| eFriday | 105.61224 | 26.357175 | 49 |
| Total | 116.38174 | 17.629388 | 241 |

**Day of the week matters - building it into our prediction will make for accurate predictions, but it's not trivially easy. Nor is the explanation going to be simple for decision-makers to process.**

```
. oneway actual dow1
```

Analysis of Variance

| Source | SS | df | MS | F | Prob > F |
|---|---|---|---|---|---|
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Bartlett's test for equal variances: chi2(4) = 69.1103 Prob>chi2 = 0.000

We can confidently reject the null that all days are the same

# OPTIONS FOR DEALING WITH DAY OF WEEK

**Ignore:** Create a regularly updating prediction that is based only on #days prior to date. By ignoring it, we sacrifice accuracy for explainability.

I've chosen t7 as an example b/c it is enough advance time for us to plan, but not so much so that it becomes too inaccurate. It FEELS like a decent balance.

```
. reg actual t7
```

| Source | SS | df | MS |
|---|---|---|---|
| Model | 59853.1765 | 1 | 59853.1765 |
| Residual | 14737.7032 | 239 | 61.6640301 |
| Total | 74590.8797 | 240 | 310.795332 |

| | | |
|---|---|---|
| Number of obs | = | 241 |
| F(1, 239) | = | 970.63 |
| Prob > F | = | 0.0000 |
| R-squared | = | 0.8024 |
| Adj R-squared | = | 0.8016 |
| Root MSE | = | 7.8526 |

| actual | Coef. | Std. Err. | t | P>\|t\| | [95% Conf. Interval] | |
|---|---|---|---|---|---|---|
| t7 | .9815375 | .031505 | 31.15 | 0.000 | .9194746 | 1.0436 |
| _cons | 31.96952 | 2.756242 | 11.60 | 0.000 | 26.53989 | 37.39915 |

Predicted = if no cases were scheduled at t7, we'd expect 32 cases. For every case at t7, we expect 0.98 new additional. In other words, prediction = 98% of cases scheduled at t7, plus another 32.

# OPTIONS FOR DEALING WITH DAY OF WEEK

**Use dummies for each day of week:** Create a regularly updating prediction that is based only on #days prior to date. By ignoring it, we sacrifice accuracy for explainability.

$$Surgeries = a + b1 * t7 + b2 * Tue + b3 * Wed + b4 * Thu + b5 * Fri$$

```
. reg actual t7 tues wed thu fri

      Source |       SS           df       MS      Number of obs   =       241
-------------+----------------------------------   F(5, 235)       =    210.90
       Model |  60997.5416         5  12199.5083   Prob > F        =    0.0000
    Residual |  13593.3381       235  57.8439918   R-squared       =    0.8178
-------------+----------------------------------   Adj R-squared   =    0.8139
       Total |  74590.8797       240  310.795332   Root MSE        =    7.6055

------------------------------------------------------------------------------
      actual |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
          t7 |    1.03106   .0343591    30.01   0.000     .9633685    1.098751
        tues |   -4.56168   1.572204    -2.90   0.004    -7.659095   -1.464264
         wed |   -3.13497   1.566168    -2.00   0.046    -6.220494    -.049447
         thu |  -7.134236   1.638417    -4.35   0.000     -10.3621   -3.906373
         fri |  -2.775591   1.574786    -1.76   0.079    -5.878092    .3269098
       _cons |   31.24773   3.042282    10.27   0.000      25.2541    37.24136
------------------------------------------------------------------------------
```

Predictions: 103% of cases scheduled at t7 plus…

If Mon: about 31 more
If Tue: about 27 more
If Wed: about 28 more
If Thu: about 24 more
If Fri: about 29 more

# OPTIONS FOR DEALING WITH DAY OF WEEK

**Use dummies + interactions:** Create a regularly updating prediction that is based only on #days prior to date. By ignoring it, we sacrifice accuracy for explainability.

$$
\begin{aligned}
Surgeries = a &+ b1 * t7 + b2 * Tue + b3 * Wed + b4 * Thu + b5 * Fri \\
&+ b6 * Tue * t7 + b7 * Wed * t7 + b8 * Thu * t7 + b9 * Fri * t7
\end{aligned}
$$

That is, does t7 matter differently depending on day of week? Does t7 predict final cases differently if it's a Monday or Tuesday or Wednesday…

```
. reg actual t7 tues wed thu fri tuext7 wedxt7 thuxt7 frixt7
```

| Source | SS | df | MS | | | |
|---|---|---|---|---|---|---|
| Model | 62507.0822 | 9 | 6945.23136 | Number of obs | = | 241 |
| Residual | 12083.7974 | 231 | 52.3108114 | F(9, 231) | = | 132.77 |
| | | | | Prob > F | = | 0.0000 |
| Total | 74590.8797 | 240 | 310.795332 | R-squared | = | 0.8380 |
| | | | | Adj R-squared | = | 0.8317 |
| | | | | Root MSE | = | 7.2326 |

| actual | Coef. | Std. Err. | t | P>\|t\| | [95% Conf. | Interval] |
|---|---|---|---|---|---|---|
| t7 | 1.11845 | .0711491 | 15.72 | 0.000 | .9782663 | 1.258635 |
| tues | 20.65563 | 11.47336 | 1.80 | 0.073 | -1.950187 | 43.26144 |
| wed | 22.46584 | 10.10844 | 2.22 | 0.027 | 2.549323 | 42.38236 |
| thu | 29.82296 | 10.92592 | 2.73 | 0.007 | 8.295759 | 51.35016 |
| fri | -5.854172 | 7.04852 | -0.83 | 0.407 | -19.74178 | 8.033434 |
| tuext7 | -.2883925 | .1299931 | -2.22 | 0.027 | -.5445162 | -.0322688 |
| wedxt7 | -.3006745 | .1177971 | -2.55 | 0.011 | -.5327685 | -.0685805 |
| thuxt7 | -.3942453 | .1177535 | -3.35 | 0.001 | -.6262535 | -.1622371 |
| frixt7 | .0500614 | .0860285 | 0.58 | 0.561 | -.1194395 | .2195623 |
| _cons | 24.04265 | 5.960131 | 4.03 | 0.000 | 12.29948 | 35.78582 |

**Monday**

24 = constant

1.11 = marginal effect of t7

*Prediction = 24+1.11*t7*

E.g., t7 = 100, then

Predicted final volume =

**24 + 1.11*100 = 135**

```
. reg actual t7 tues wed thu fri tuext7 wedxt7 thuxt7 frixt7

      Source |       SS       df       MS              Number of obs =     241
-------------+------------------------------           F(9, 231)     =  132.77
       Model |  62507.0822     9  6945.23136           Prob > F      =  0.0000
    Residual |  12083.7974   231  52.3108114           R-squared     =  0.8380
-------------+------------------------------           Adj R-squared =  0.8317
       Total |  74590.8797   240  310.795332           Root MSE      =  7.2326

------------------------------------------------------------------------------
      actual |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
          t7 |    1.11845   .0711491    15.72   0.000     .9782663    1.258635
        tues |   20.65563   11.47336     1.80   0.073    -1.950187    43.26144
         wed |   22.46584   10.10844     2.22   0.027     2.549323    42.38236
         thu |   29.82296   10.92592     2.73   0.007     8.295759    51.35016
         fri |  -5.854172    7.04852    -0.83   0.407    -19.74178    8.033434
      tuext7 |  -.2883925   .1299931    -2.22   0.027    -.5445162   -.0322688
      wedxt7 |  -.3006745   .1177971    -2.55   0.011    -.5327685   -.0685805
      thuxt7 |  -.3942453   .1177535    -3.35   0.001    -.6262535   -.1622371
      frixt7 |   .0500614   .0860285     0.58   0.561    -.1194395    .2195623
       _cons |   24.04265   5.960131     4.03   0.000     12.29948    35.78582
------------------------------------------------------------------------------
```

**Monday**
24 = constant
1.11 = marginal effect of t7

*Prediction = 24+1.11*t7*

E.g., t7 = 100, then
Predicted final volume =
**24 + 1.11*100 = 135**

**Tuesday**
24+20 = 44 constant
1.11-0.28=0.83 marginal effect

*Prediction = 44 + 0.83*t7*

E.g., t7 = 100, then
Predicted final volume =
**44 + 0.83*100 = 127**

```
. reg actual t7 tues wed thu fri tuext7 wedxt7 thuxt7 frixt7
```

```
      Source |       SS           df       MS      Number of obs   =       241
                                                   )               =    132.77
                                                                   =    0.0000
                                                   d               =    0.8380
                                                   uared           =    0.8317
                                                                   =    7.2326
```

**In other words, 100 at t7 leads to a different prediction if a Monday versus Tuesday versus…**

| actual | Coef. | Std. Err. | t | P>\|t\| | [95% Conf. | Interval] |
|---|---|---|---|---|---|---|
| t7 | 1.11845 | .0711491 | 15.72 | 0.000 | .9782663 | 1.258635 |
| tues | 20.65563 | 11.47336 | 1.80 | 0.073 | -1.950187 | 43.26144 |
| wed | 22.46584 | 10.10844 | 2.22 | 0.027 | 2.549323 | 42.38236 |
| thu | 29.82296 | 10.92592 | 2.73 | 0.007 | 8.295759 | 51.35016 |
| fri | -5.854172 | 7.04852 | -0.83 | 0.407 | -19.74178 | 8.033434 |
| tuext7 | -.2883925 | .1299931 | -2.22 | 0.027 | -.5445162 | -.0322688 |
| wedxt7 | -.3006745 | .1177971 | -2.55 | 0.011 | -.5327685 | -.0685805 |
| thuxt7 | -.3942453 | .1177535 | -3.35 | 0.001 | -.6262535 | -.1622371 |
| frixt7 | .0500614 | .0860285 | 0.58 | 0.561 | -.1194395 | .2195623 |
| _cons | 24.04265 | 5.960131 | 4.03 | 0.000 | 12.29948 | 35.78582 |

**Monday**

24 = constant

1.11 = marginal effect of t7

*Prediction = 24+1.11*t7*

E.g., t7 = 100, then

Predicted final volume =

**24 + 1.11*100 = 135**

**Tuesday**

24+20 = 44 constant

1.11-0.28=0.83 marginal effect

*Prediction = 44 + 0.83*t7*

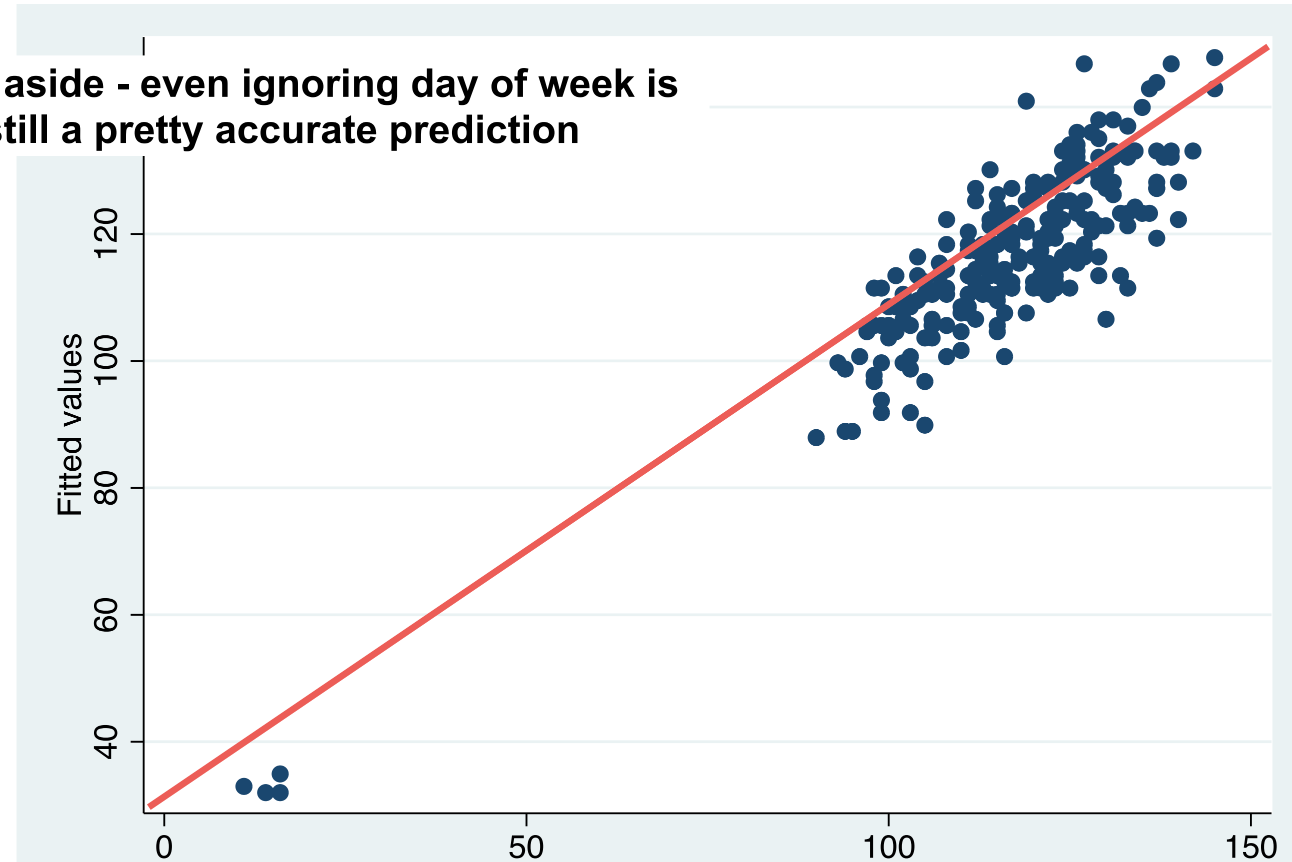
E.g., t7 = 100, then

Predicted final volume =

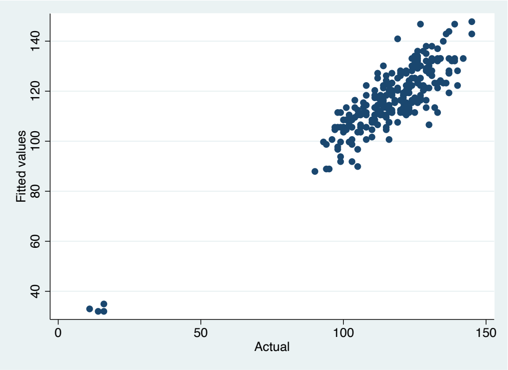
**44 + 0.83*100 = 127**

Quick aside - even ignoring day of week is still a pretty accurate prediction

**Predicted Values**

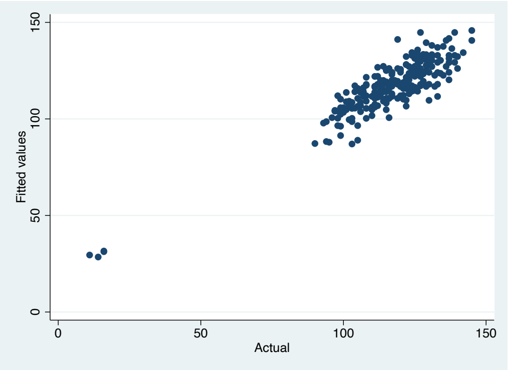



**Actual Values**



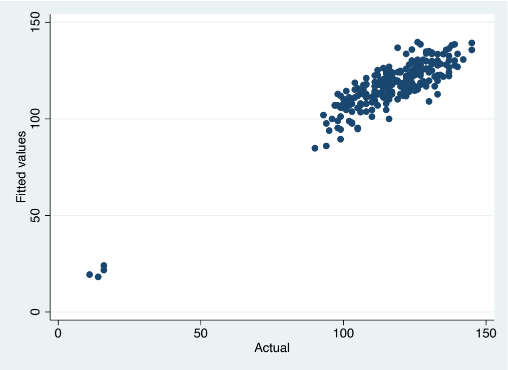

Create a regularly updating prediction that is based only on #days prior to date.  Ignore day of week, sacrificing accuracy for explainability.

**(At t7, R^2 = 0.80)**




Build in day or week through dummies only

**(At t7, R^2 = 0.81)**




Build in day or week through dummies and interactions.

**(At t7, R^2 = 0.84)**

# QUESTION 4

1. Think of multiple ways that the creation of a predictive model can be helpful in this context.
2. Conduct quant analysis to determine
   a. Whether # scheduled cases is predictive of final case volume
   b. Whether predictive power changes as surgery date nears
   c. Is volume different across days of the week?
3. Most helpful predictive model
4. **Sample dashboard**

# SAMPLE DASHBOARD

| | Mon 7/14 | Tues 7/15 | Wed 7/16 | Thu 7/17 | Fri 7/18 | Mon 7/21 | Tues 7/22 | Wed 7/23 | Thu 7/24 | Fri 7/25 |
|---|---|---|---|---|---|---|---|---|---|---|
| Budgeted Volume | 123 | 123 | 123 | 123 | 123 | 123 | 123 | 123 | 123 | 123 |
| Prediction based on booked cases as of… | T-3 | T-4 | T-5 | T-6 | T-7 | T-10 | T-11 | T-12 | T-13 | T-14 |
| Booked cases to date | 111 | 116 | 99 | 120 | 68 | 91 | 87 | 83 | 92 | 42 |
| Predicted Volume | **125** | **131** | **121** | **138** | **98** | **130** | **124** | **126** | **133** | **86** |
| 80% chance final will be between | 118-132 | 124-138 | 114-128 | 131-146 | 89-107 | 121-139 | 115-134 | 117-135 | 123-142 | 75-98 |
| Predicted Load | **Medium** | **High** | **Medium** | **Very High** | **Low** | **Medium** | **Medium** | **Medium** | **High** | **Very Low** |

# COOLEST SOLUTION I'VE SEEN SO FAR…

**Future Caseload Expectation Dashboard**

| | Day of the Week | Timeframe | Scheduled Cases |
|---|---|---|---|
| *Enter data here* | Monday | T-28 | 86 |

| Today's Date | | Prediction Date | |
|---|---|---|---|
| *11/14/22* | *28 days away* | *12/12/22* | *Mon* |
| | *21 days away* | *12/5/22* | *Mon* |
| | *14 days away* | *11/28/22* | *Mon* |
| | *7 days away* | *11/21/22* | *Mon* |

**Expected Cases**
**172**

| Case Volume | |
|---|---|
| Very High | >144 |
| High | 126-144 |
| Normal | 107-125 |
| Low | 88-106 |
| Very Low | <88 |

| Timeframe | Avg MoE |
|---|---|
| T-28 | 8.83% |
| T-21 | 8.65% |
| T-14 | 7.70% |
| T-7 | 5.83% |

*Upcoming Schedule*

| Date | Expected Cases | MoE |
|---|---|---|
| 2/7/22 *(M)* | 120 | 5.83% |
| 2/8/22 *(Tu)* | 138 | 5.83% |
| 2/9/22 *(W)* | 90 | 7.70% |
| 2/10/22 *(Th)* | 111 | 7.70% |
| 2/11/22 *(F)* | 121 | 7.70% |
| 2/12/22 *(Sa)* | | |
| 2/13/22 *(Su)* | | |
| 2/14/22 *(M)* | 141 | 8.65% |
| 2/15/22 *(Tu)* | 145 | 8.65% |
| 2/16/22 *(W)* | 114 | 8.65% |
| 2/17/22 *(Th)* | 110 | 8.65% |
| 2/18/22 *(F)* | 14 | 8.65% |
| 2/19/22 *(Sa)* | | |
| 2/20/22 *(Su)* | | |

Dashboard | OgData | DaySeparation | ErrorbyPredictionTime | PredictionData | DashboardData