

# Orthogonal Projections in Patients dataset

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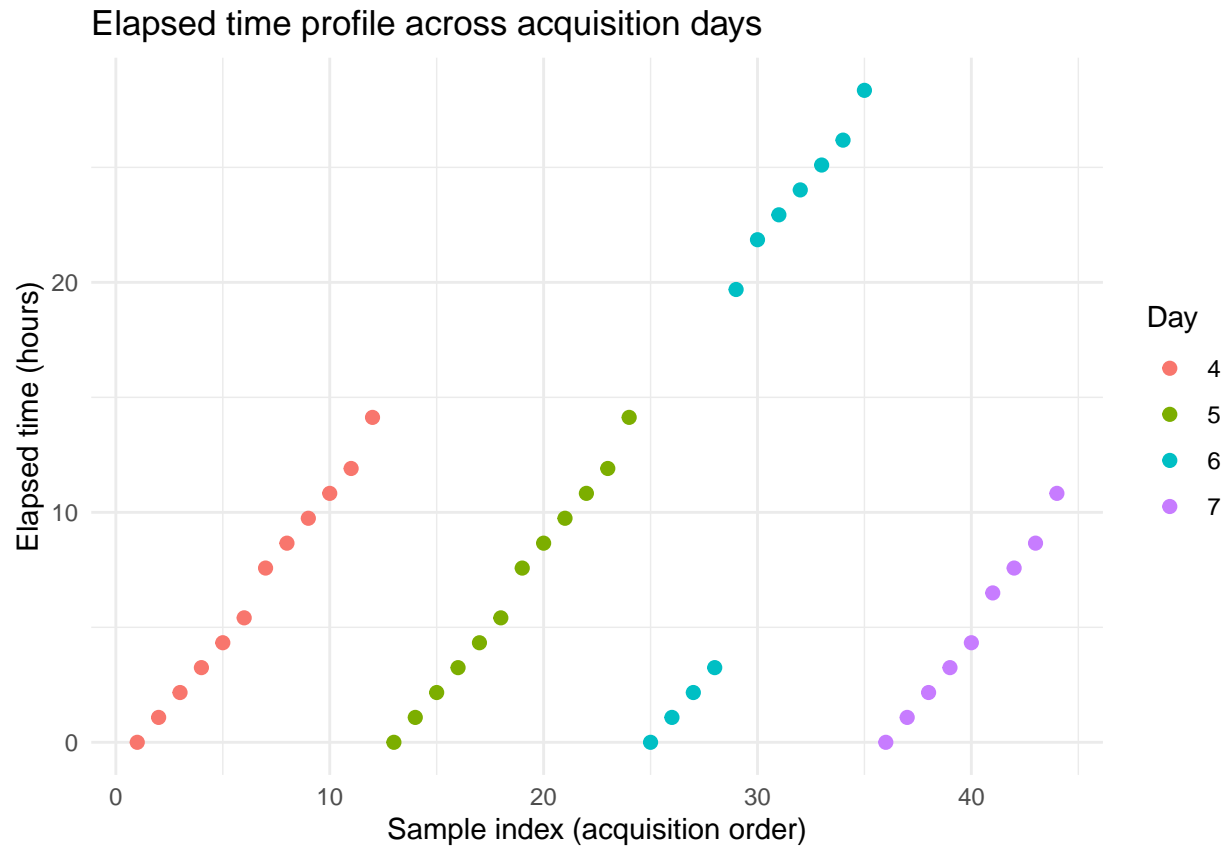
## Contents

1	Load and Prepare Data	1
2	Exploring Batch Influence	2
3	Exploring order influence	4
4	Conclusions	6

## 1 Load and Prepare Data

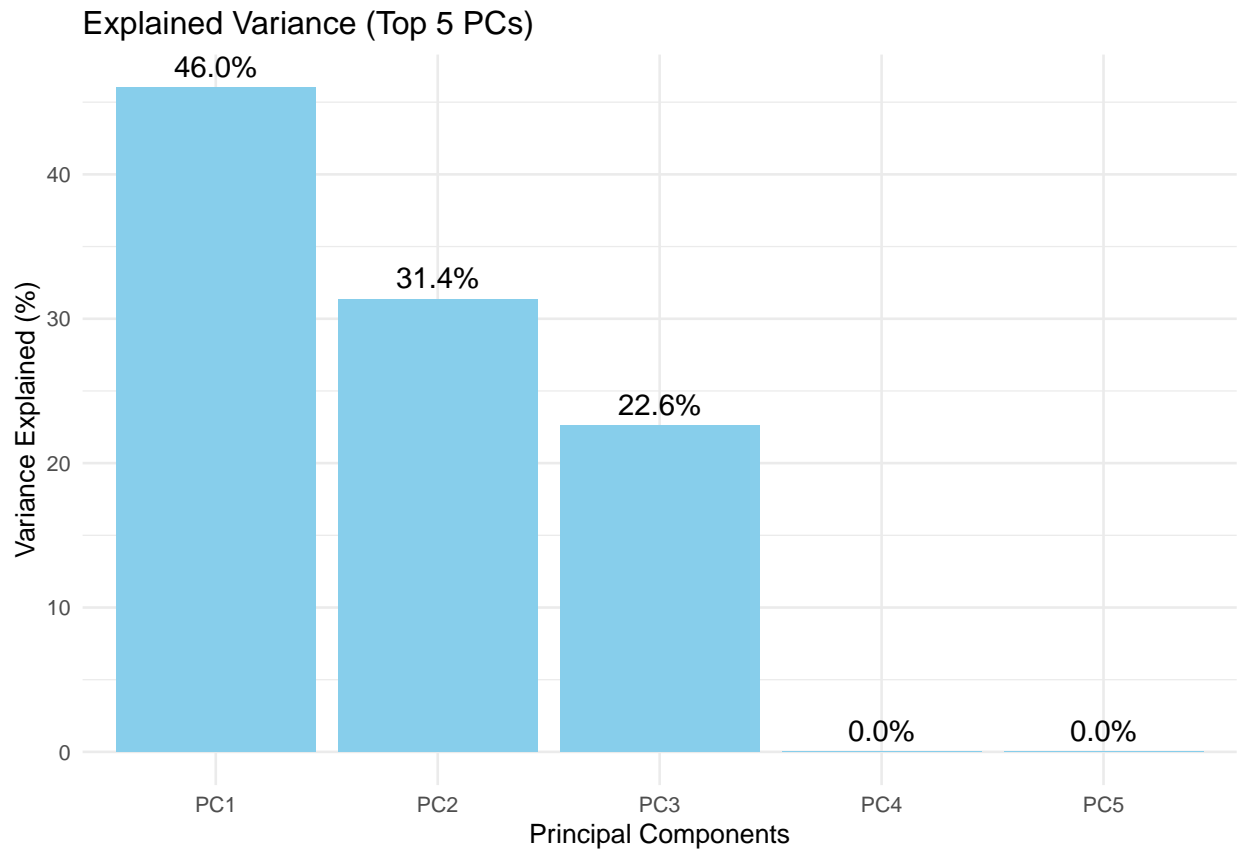
```
## # A tibble: 6 x 2
##   SampleID      datetime
##   <chr>         <dtm>
## 1 250519_150601.mea 2025-05-19 15:06:01
## 2 250519_161058.mea 2025-05-19 16:10:58
## 3 250519_171554.mea 2025-05-19 17:15:54
## 4 250519_182051.mea 2025-05-19 18:20:51
## 5 250519_192549.mea 2025-05-19 19:25:49
## 6 250519_203045.mea 2025-05-19 20:30:45

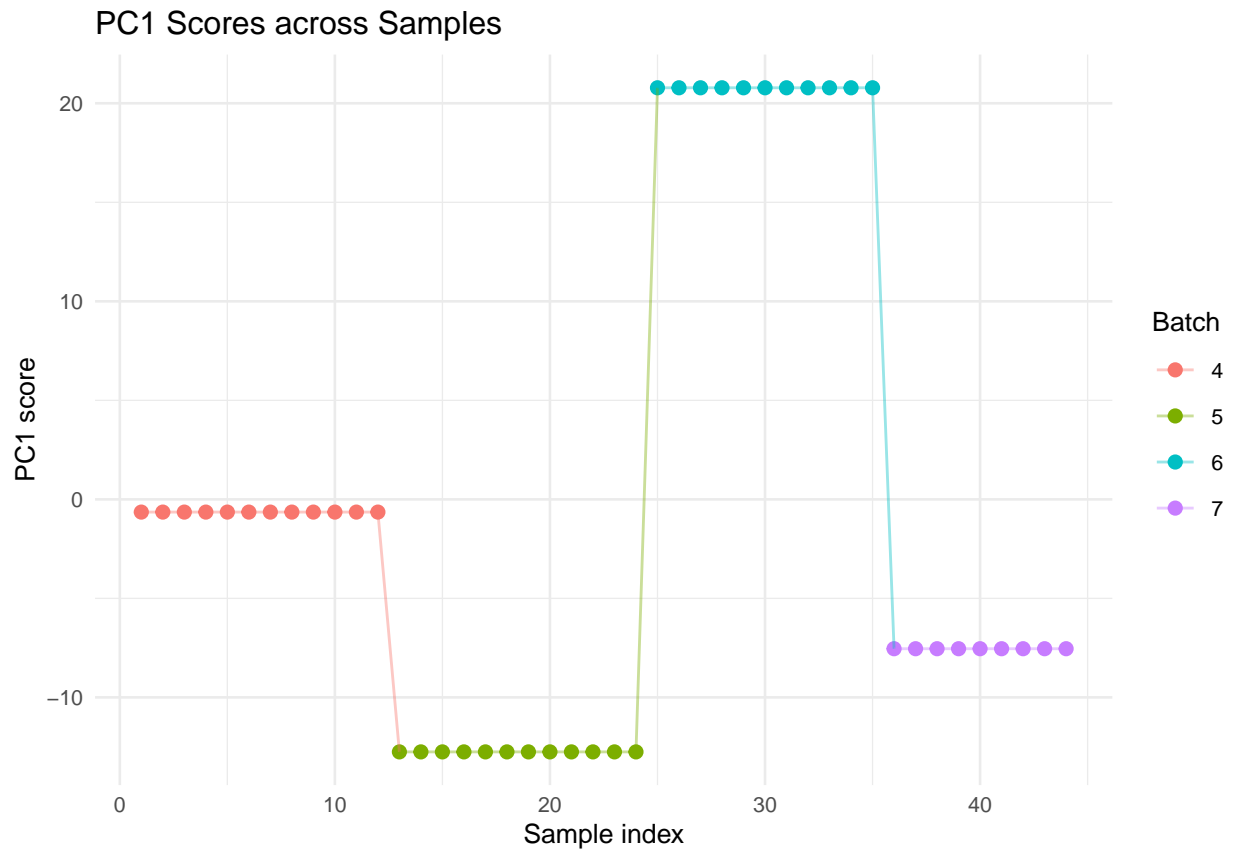
## # A tibble: 6 x 4
##   SampleID      datetime      day elapsed_time
##   <chr>         <dtm>         <dbl>      <dbl>
## 1 250519_150601.mea 2025-05-19 15:06:01      4          0
## 2 250519_161058.mea 2025-05-19 16:10:58      4         1.08
## 3 250519_171554.mea 2025-05-19 17:15:54      4         2.16
## 4 250519_182051.mea 2025-05-19 18:20:51      4         3.25
## 5 250519_192549.mea 2025-05-19 19:25:49      4         4.33
## 6 250519_203045.mea 2025-05-19 20:30:45      4         5.41
```



## 2 Exploring Batch Influence

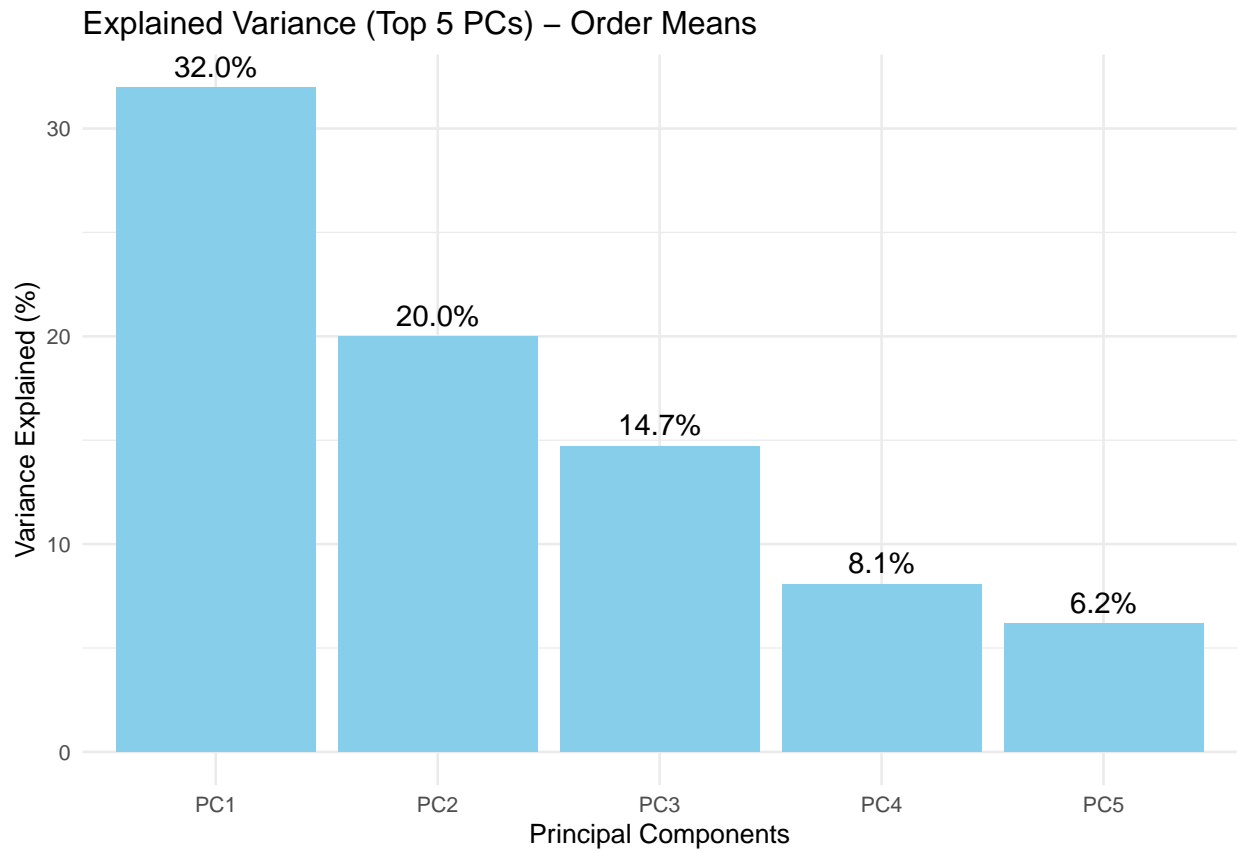
## Percentage of total variance explained by batch means: 7.33 %

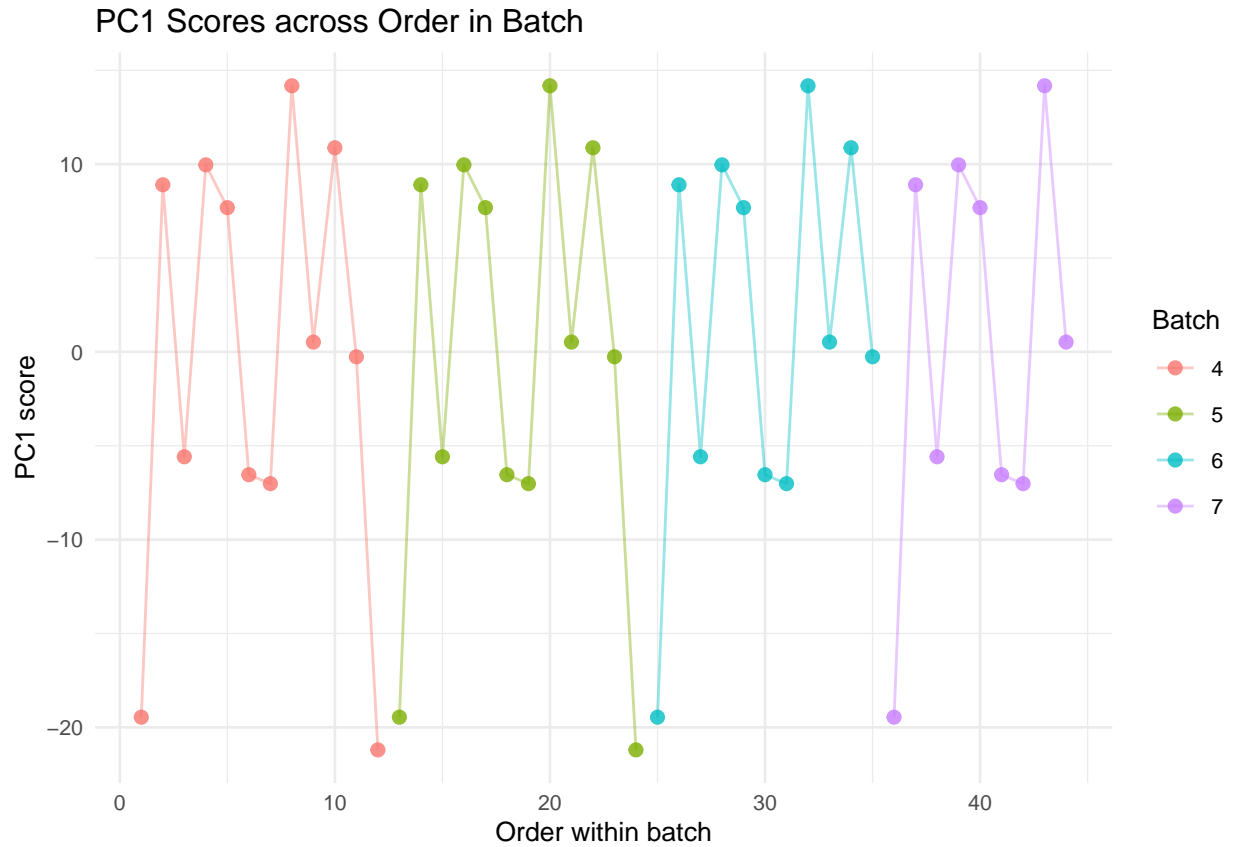




### 3 Exploring order influence

## Percentage of total variance explained by order means: 34 %





## 4 Conclusions

- Batch effects explain only a small fraction (7%) of the total variance.
- Order within batch has a stronger effect (30%), but the variance is spread across several PCs.