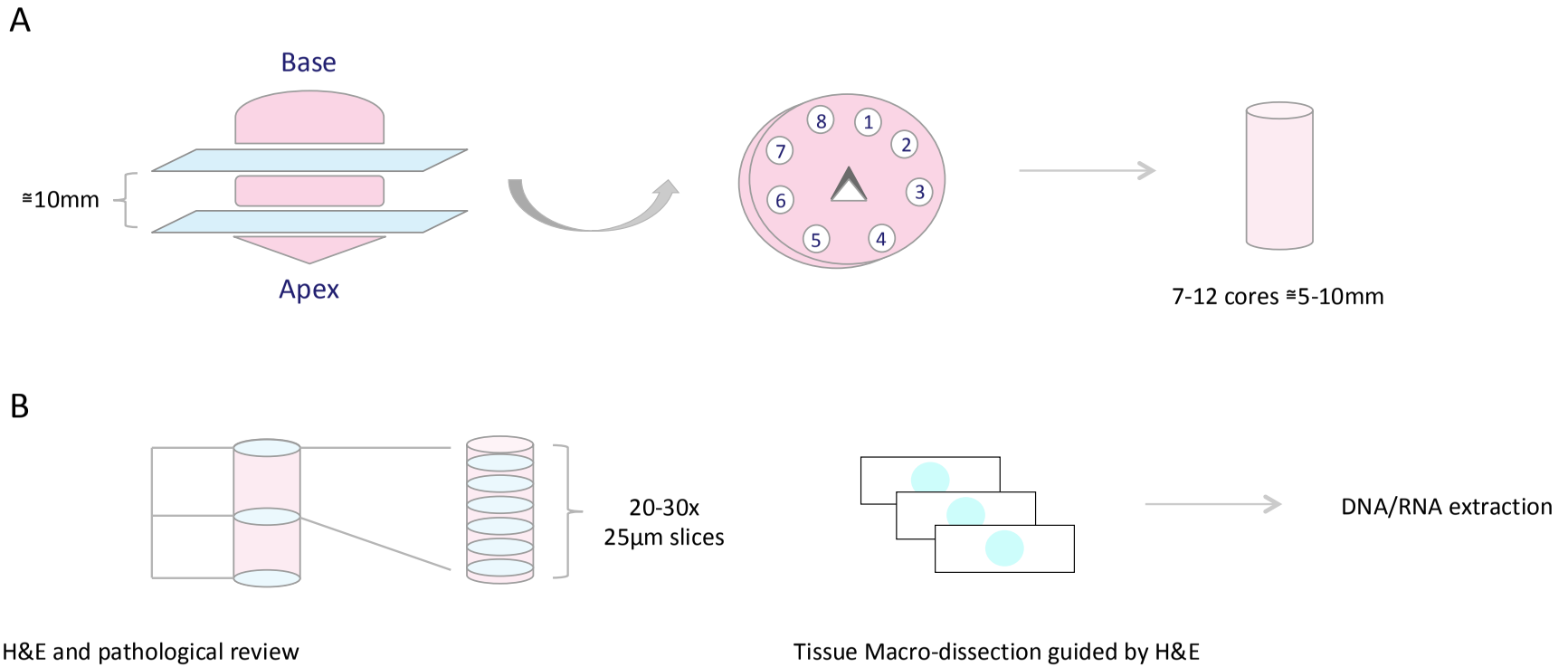
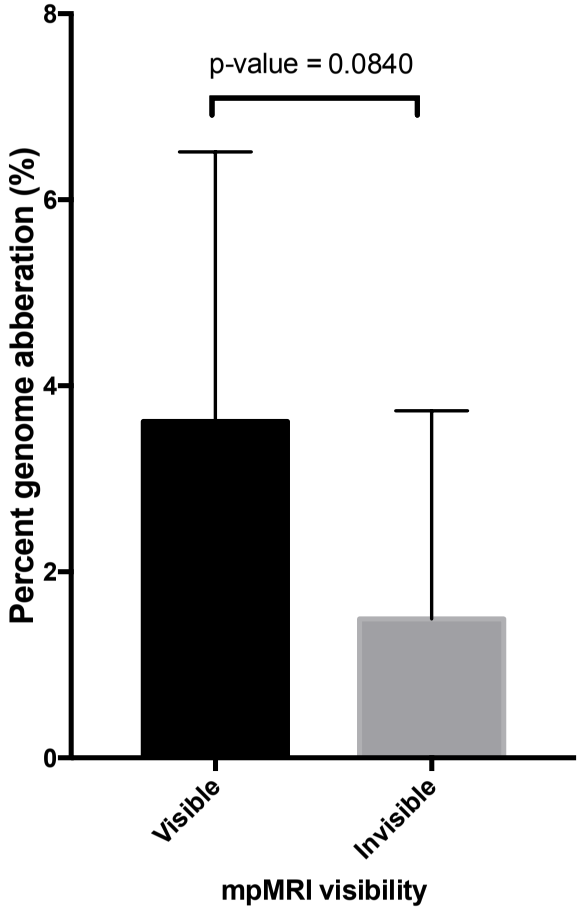
**Supplementary Figure 1**

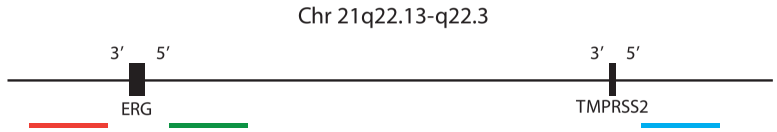


**Supplementary Figure 2**

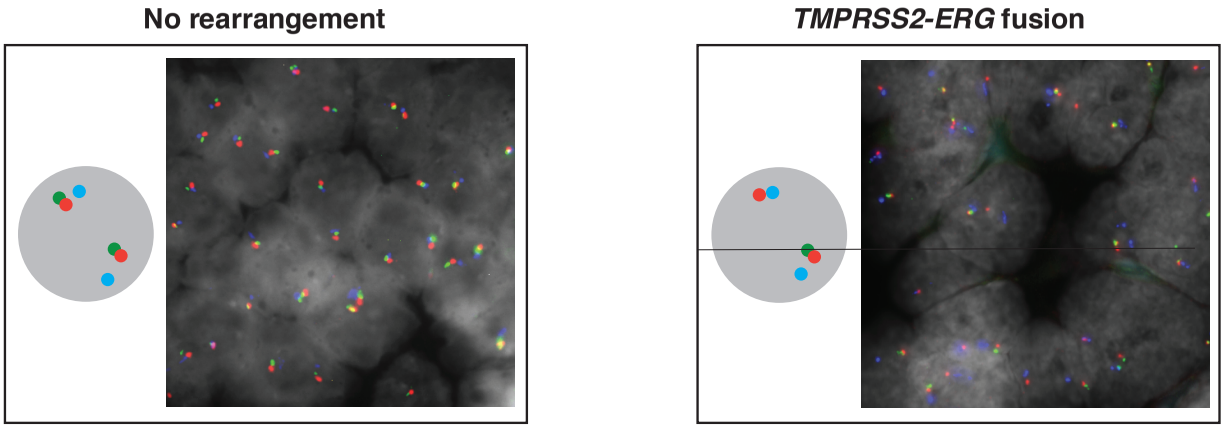


## Supplementary Figure 3

**A**




**B**

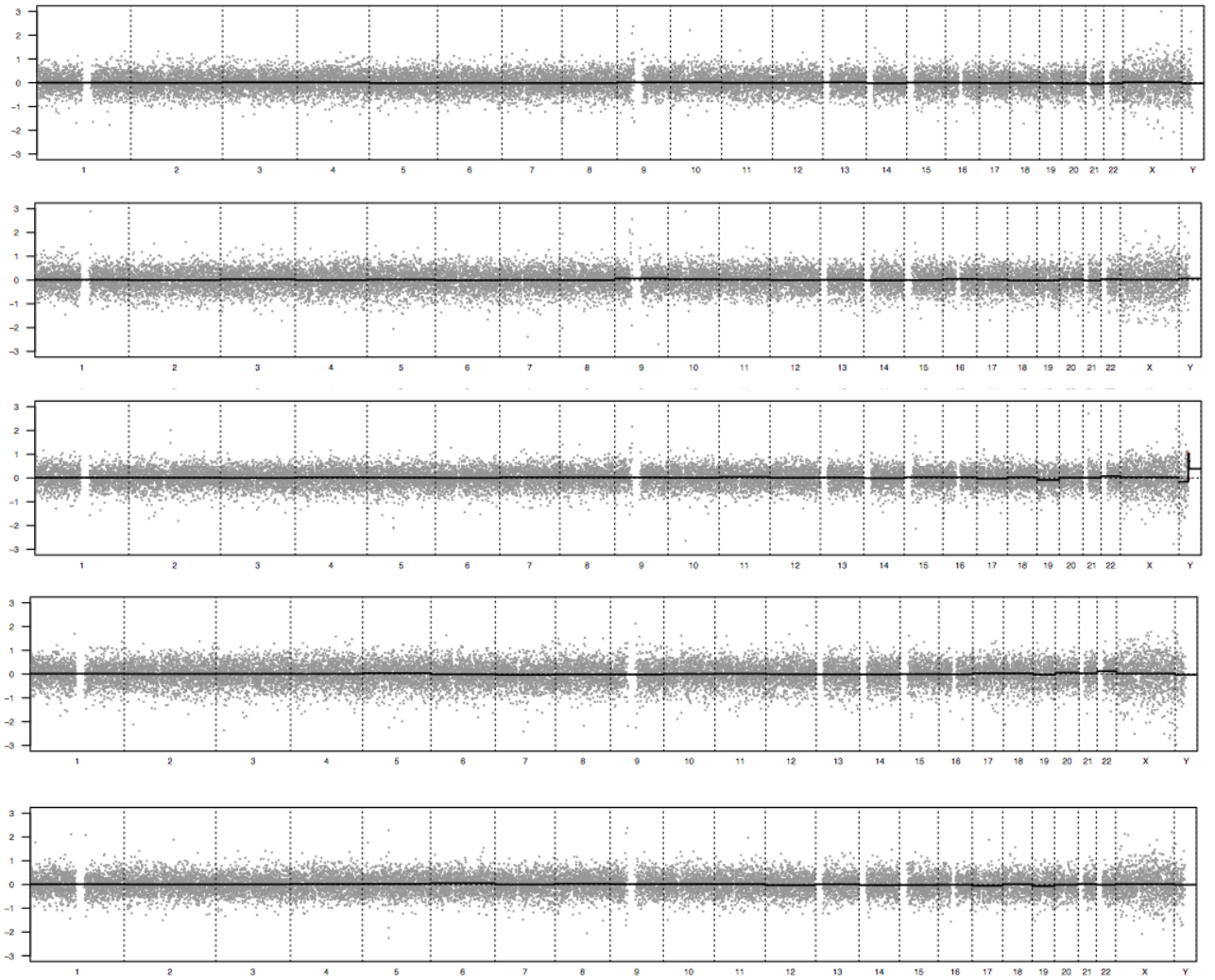



**C**

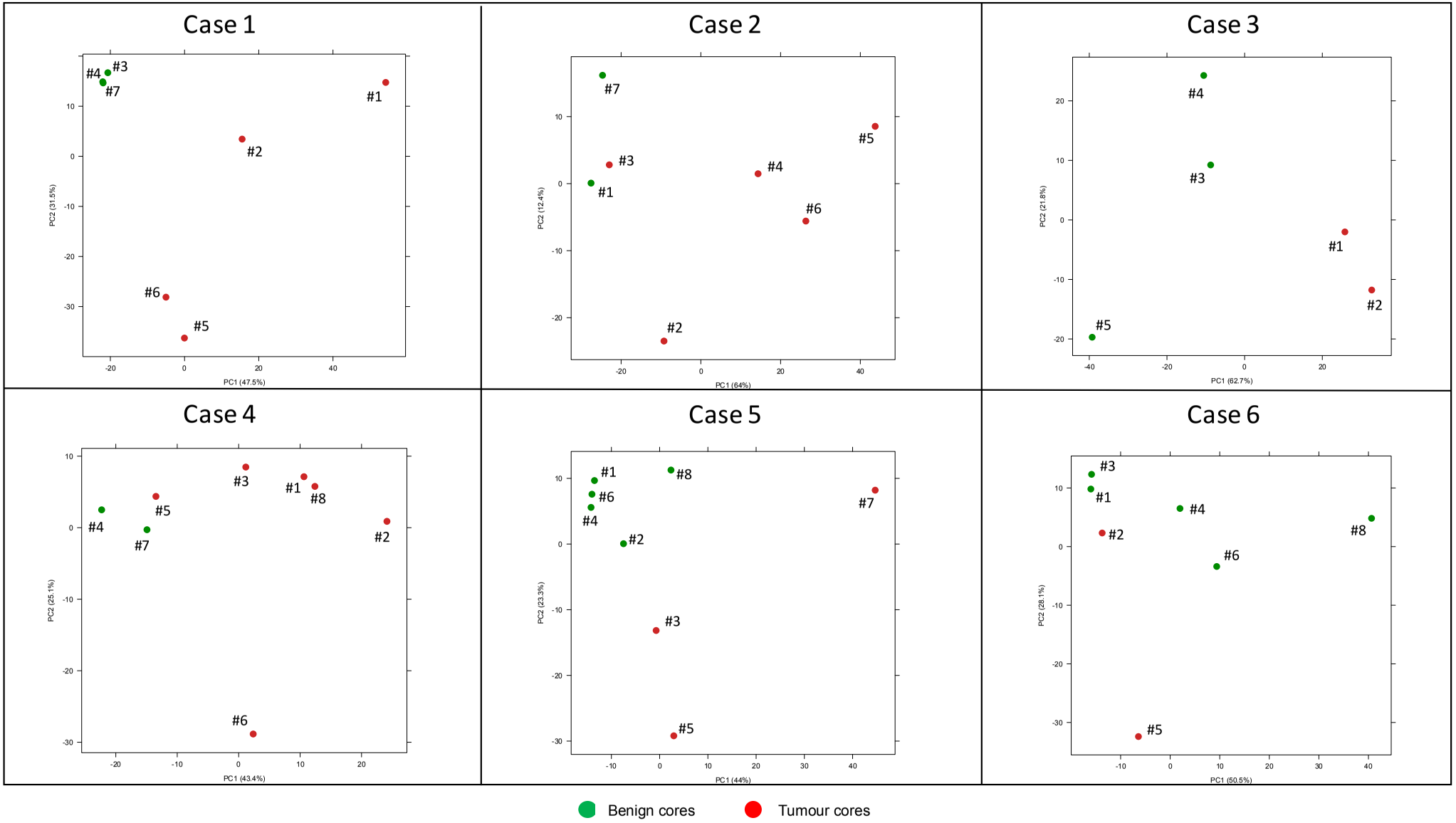
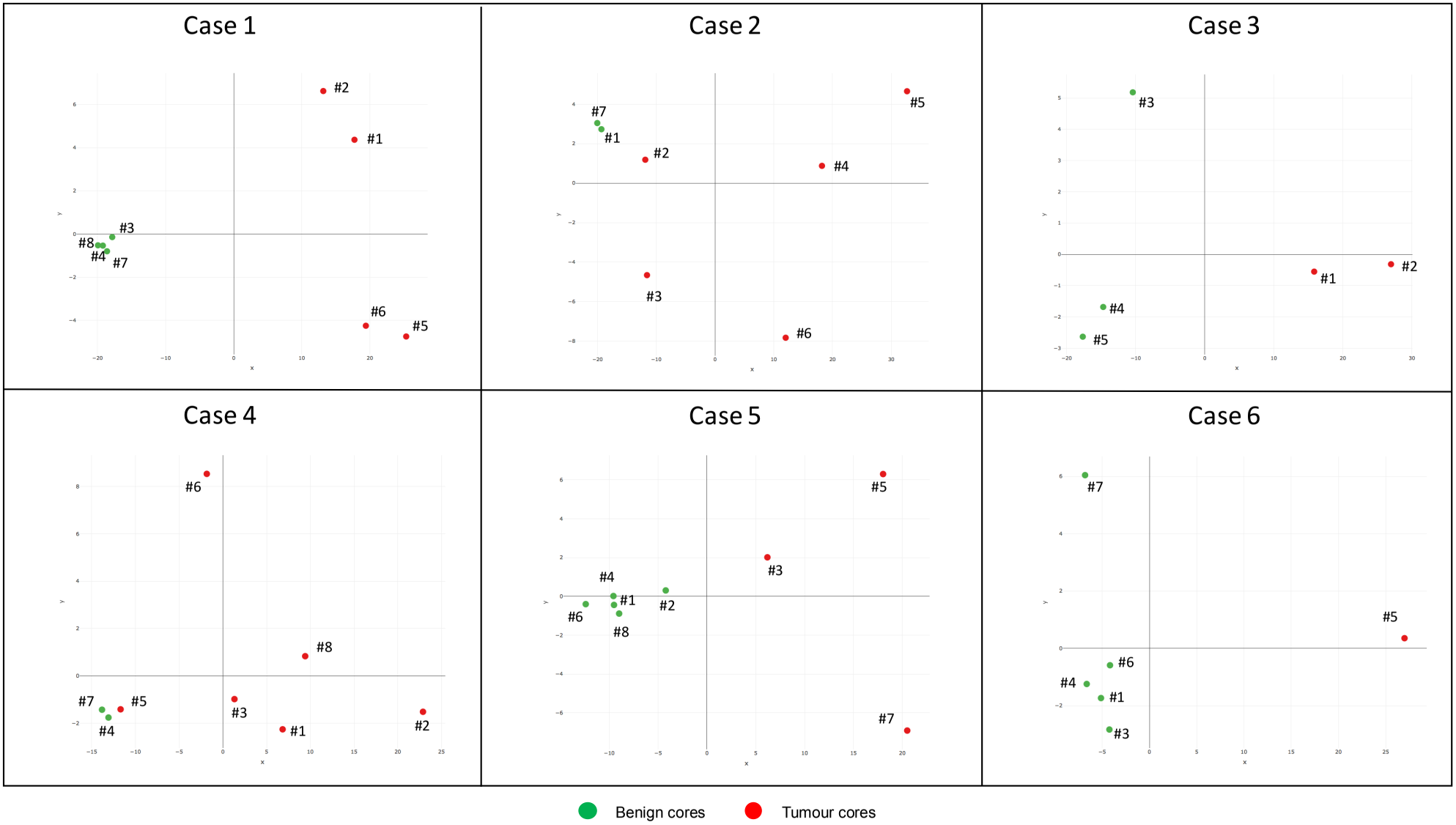
| Sample | Core | FISH | Cells (%) |
|---|---|---|---|
| Case1 | 1 | N | 100 |
| | 2 | N | 100 |
| | 5 | N | 100 |
| | 6 | N | 100 |
| Case2 | 2 | N | 100 |
| | 3 | N | 100 |
| | 4 | N | 100 |
| | 5 | N | 100 |
| | 6 | N | 100 |
| Case3 | 1 | TE | 70.6 |
| | 2 | TE | 98.0 |
| Case4 | 1 | n/a | n/a |
| | 2 | N | 100 |
| | 3 | N | 100 |
| | 5 | N | 100 |
| | 6 | TE | 100 |
| | 8 | N | 100 |
| Case5 | 3 | N | 100 |
| | 5 | N | 100 |
| | 7 | N | 100 |
| Case6 | 2 | N | 100 |
| | 5 | TE | 95.6 |

N= No TMPRSS2-ERG Fusion
TE= TMPRSS2-ERG Fusion

**Supplementary Figure 4**



## Supplementary Figure 5



## Supplementary Figure 6