

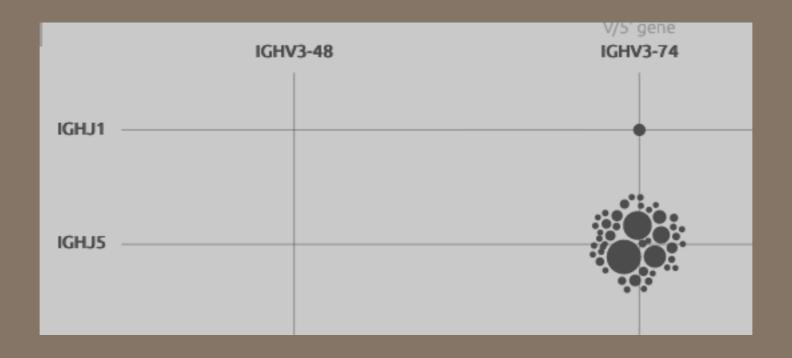
#### **Pipeline**

P2 dataset with 33599 seq

Run Vidjil

Select 10 most abundant clones

Run GCtree on the selection (consensus sequence)



Too high for GCtree to manage, need to divide by 100

| Clone rank | # read | % read | IGHV     | IGHJ  |
|------------|--------|--------|----------|-------|
| clone 1    | 11772  | 35 %   | V3-74*01 | J5*02 |
| clone 2    | 6778   | 20 %   | V3-74*02 | J5*02 |
| clone 3    | 3191   | 10 %   | V3-74*01 | J5*02 |
| clone 4    | 1494   | 4 %    | V3-74*01 | J5*02 |
| clone 5    | 699    | 2 %    | V3-74*01 | J5*02 |
| clone 6    | 513    | 2 %    | V3-74*03 | J1*01 |
| clone 7    | 464    | 1 %    | V3-74*01 | J5*02 |
| clone 8    | 395    | 1 %    | V3-74*01 | J5*02 |
| clone 9    | 369    | 1 %    | V3-74*01 | J5*02 |
| clone 10   | 301    | 0,08 % | V3-74*01 | J5*02 |

| Clone rank | # read % read |        | IGHV     | IGHJ  |  |
|------------|---------------|--------|----------|-------|--|
| clone 1    | 117           | 35 %   | V3-74*01 | J5*02 |  |
| clone 2    | 67            | 20 %   | V3-74*02 | J5*02 |  |
| clone 3    | 31            | 10 %   | V3-74*01 | J5*02 |  |
| clone 4    | 15            | 4 %    | V3-74*01 | J5*02 |  |
| clone 5    | 7             | 2 %    | V3-74*01 | J5*02 |  |
| clone 6    | 5             | 2 %    | V3-74*03 | J1*01 |  |
| clone 7    | 4             | 1 %    | V3-74*01 | J5*02 |  |
| clone 8    | 4             | 1 %    | V3-74*01 | J5*02 |  |
| clone 9    | 3             | 1 %    | V3-74*01 | J5*02 |  |
| clone 10   | 3             | 0,08 % | V3-74*01 | J5*02 |  |

| Clone rank | # read | % read | IGHV     | IGHJ  |
|------------|--------|--------|----------|-------|
| clone 1    | 117    | 35 %   | V3-74*01 | J5*02 |
| clone 2    | 67     | 20 %   | V3-74*02 | J5*02 |
| clone 3    | 31     | 10 %   | V3-74*01 | J5*02 |
| clone 4    | 15     | 4 %    | V3-74*01 | J5*02 |
| clone 5    | 7      | 2 %    | V3-74*01 | J5*02 |
| clone 6    | 5      | 2 %    | V3-74*03 | J1*01 |
| clone 7    | 4      | 1 %    | V3-74*01 | J5*02 |
| clone 8    | 4      | 1 %    | V3-74*01 | J5*02 |
| clone 9    | 3      | 1 %    | V3-74*01 | J5*02 |
| clone 10   | 3      | 0,08 % | V3-74*01 | J5*02 |

| Clone rank | # read | % read | IGHV     | IGHJ  |  |
|------------|--------|--------|----------|-------|--|
| clone 1    | 117    | 35 %   | V3-74*01 | J5*02 |  |
| clone 2    | 67     | 20 %   | V3-74*02 | J5*02 |  |
| clone 3    | 31     | 10 %   | V3-74*01 | J5*02 |  |
| clone 4    | 15     | 4 %    | V3-74*01 | J5*02 |  |
| clone 5    | 7      | 2 %    | V3-74*01 | J5*02 |  |
| clone 6    | 5      | 2 %    | V3-74*03 | J1*01 |  |
| clone 7    | 4      | 1 %    | V3-74*01 | J5*02 |  |
| clone 8    | 4      | 1 %    | V3-74*01 | J5*02 |  |
| clone 9    | 3      | 1 %    | V3-74*01 | J5*02 |  |
| clone 10   | 3      | 0,08 % | V3-74*01 | J5*02 |  |

V3-74\*01 J5\*02

| Clone rank | # read | % read | IGHV     | IGHJ  |
|------------|--------|--------|----------|-------|
| clone 1    | 117    | 35 %   | V3-74*01 | J5*02 |
| clone 2    | 67     | 20 %   | V3-74*02 | J5*02 |
| clone 3    | 31     | 10 %   | V3-74*01 | J5*02 |
| clone 4    | 15     | 4 %    | V3-74*01 | J5*02 |
| clone 5    | 7      | 2 %    | V3-74*01 | J5*02 |
| clone 6    | 5      | 2 %    | V3-74*03 | J1*01 |
| clone 7    | 4      | 1 %    | V3-74*01 | J5*02 |
| clone 8    | 4      | 1 %    | V3-74*01 | J5*02 |
| clone 9    | 3      | 1 %    | V3-74*01 | J5*02 |
| clone 10   | 3      | 0,08 % | V3-74*01 | J5*02 |

## V3-74\*02 J5\*02

| Clone rank | # read | % read | IGHV     | IGHJ  |
|------------|--------|--------|----------|-------|
| clone 1    | 117    | 35 %   | V3-74*01 | J5*02 |
| clone 2    | 67     | 20 %   | V3-74*02 | J5*02 |
| clone 3    | 31     | 10 %   | V3-74*01 | J5*02 |
| clone 4    | 15     | 4 %    | V3-74*01 | J5*02 |
| clone 5    | 7      | 2 %    | V3-74*01 | J5*02 |
| clone 6    | 5      | 2 %    | V3-74*03 | J1*01 |
| clone 7    | 4      | 1 %    | V3-74*01 | J5*02 |
| clone 8    | 4      | 1 %    | V3-74*01 | J5*02 |
| clone 9    | 3      | 1 %    | V3-74*01 | J5*02 |
| clone 10   | 3      | 0,08 % | V3-74*01 | J5*02 |

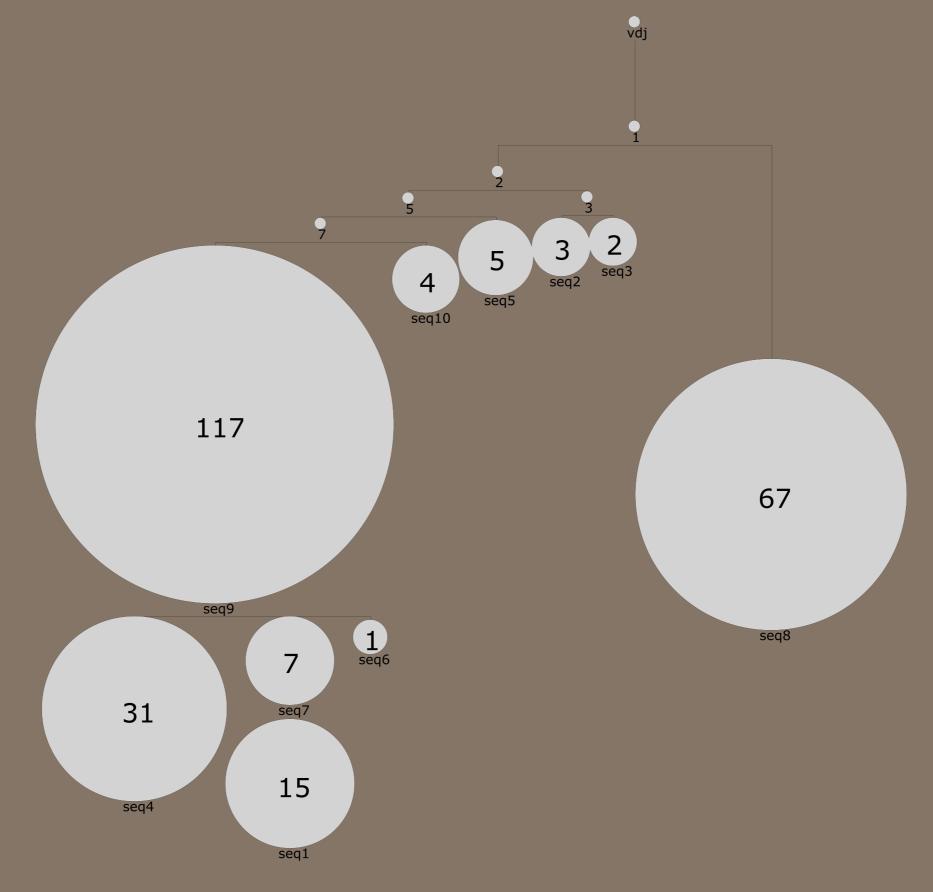
V3-74\*03 J1\*01

| Clone rank | # read | % read | IGHV     | IGHJ  |
|------------|--------|--------|----------|-------|
| clone 1    | 117    | 35 %   | V3-74*01 | J5*02 |
| clone 2    | 67     | 20 %   | V3-74*02 | J5*02 |
| clone 3    | 31     | 10 %   | V3-74*01 | J5*02 |
| clone 4    | 15     | 4 %    | V3-74*01 | J5*02 |
| clone 5    | 7      | 2 %    | V3-74*01 | J5*02 |
| clone 6    | 5      | 2 %    | V3-74*03 | J1*01 |
| clone 7    | 4      | 1 %    | V3-74*01 | J5*02 |
| clone 8    | 4      | 1 %    | V3-74*01 | J5*02 |
| clone 9    | 3      | 1 %    | V3-74*01 | J5*02 |
| clone 10   | 3      | 0,08 % | V3-74*01 | J5*02 |

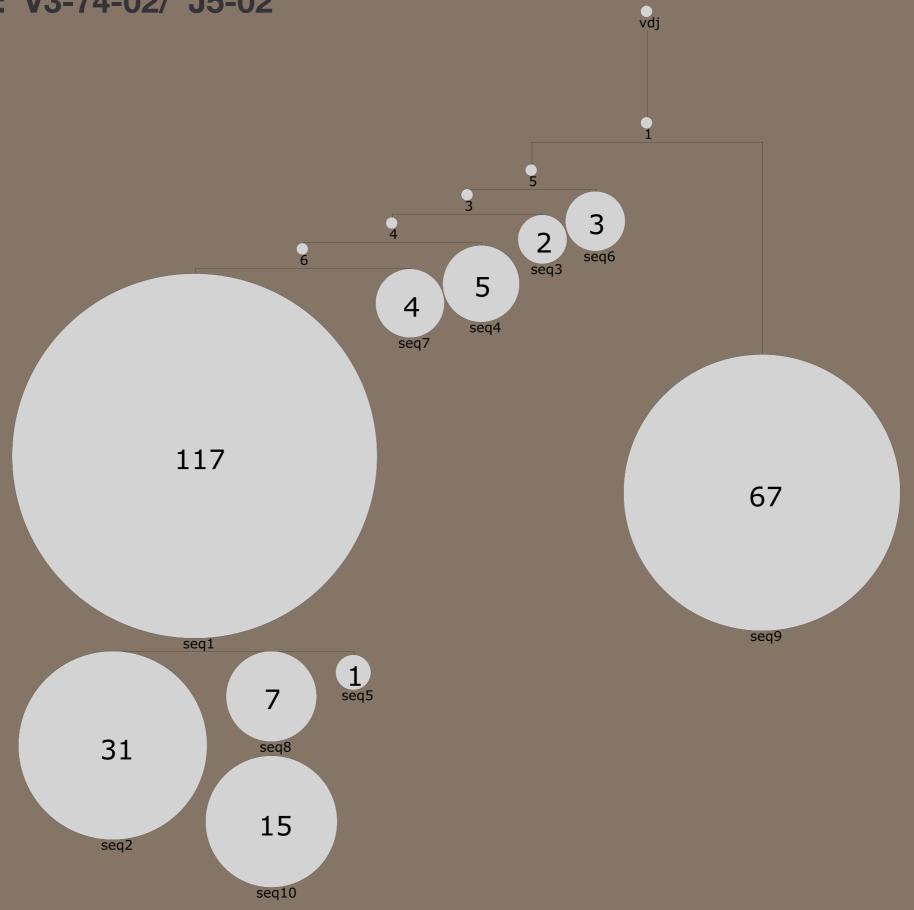
## **Germlines to try**

```
V3-74*01 / J5*02
```

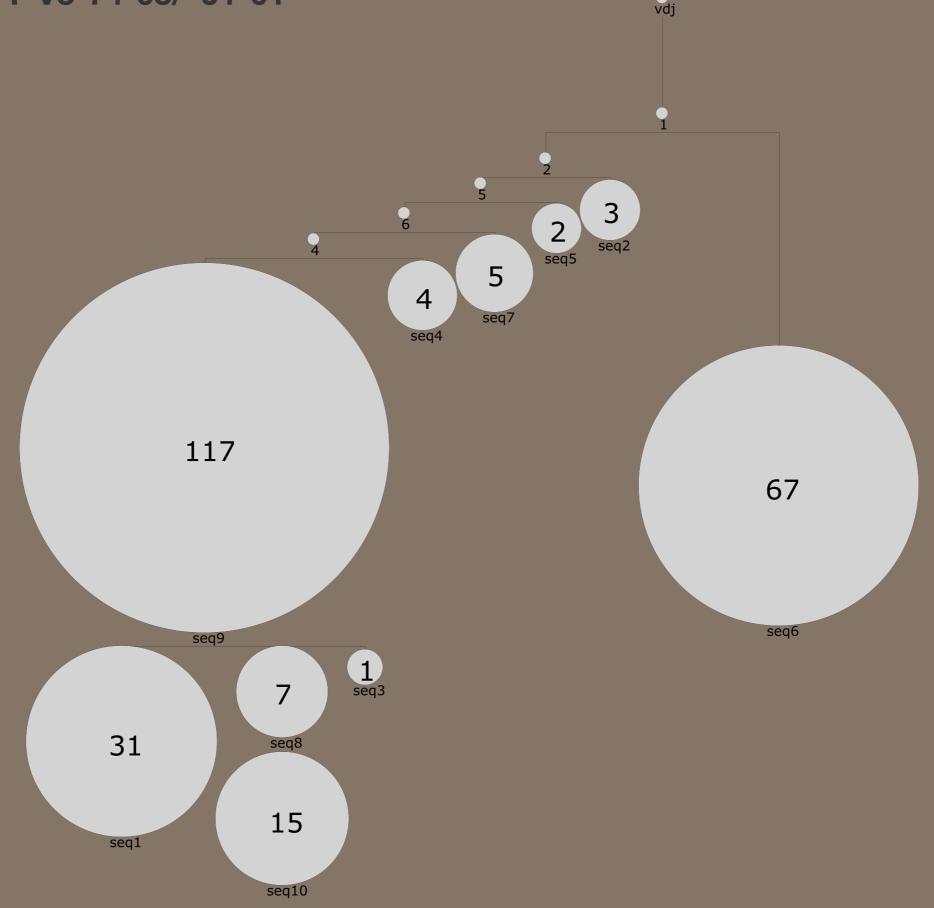
## Germline: V3-74-01/ J5-02

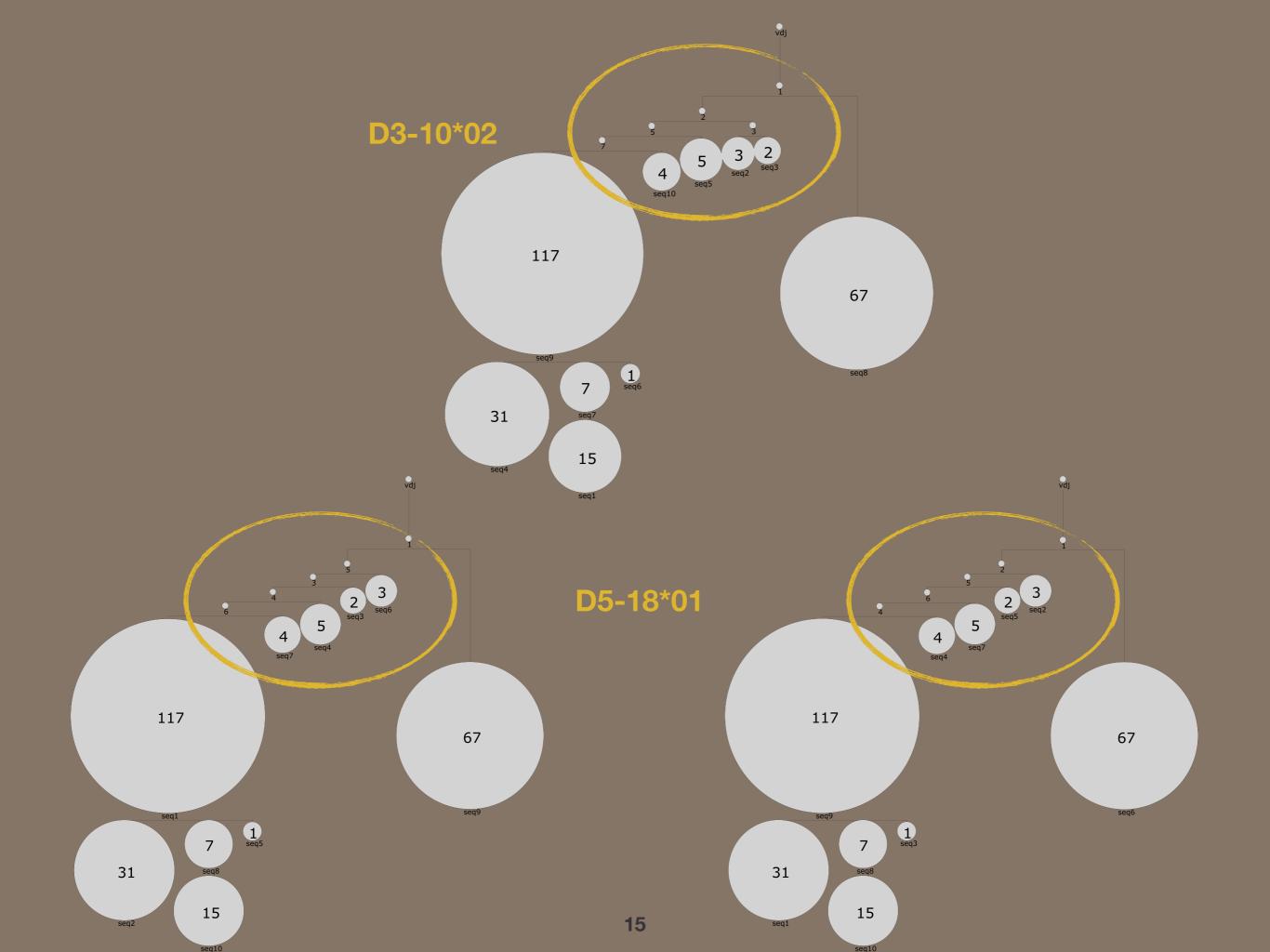


### Germline: V3-74-02/ J5-02



### Germline: V3-74-03/ J1-01





## The role of D?

| Clone rank | # read | % read | IGHV     | IGHD     | IGHJ  |
|------------|--------|--------|----------|----------|-------|
| clone 1    | 117    | 35 %   | V3-74*01 | D3-10*02 | J5*02 |
| clone 2    | 67     | 20 %   | V3-74*02 | D5-18*01 | J5*02 |
| clone 3    | 31     | 10 %   | V3-74*01 | D3-10*02 | J5*02 |
| clone 4    | 15     | 4 %    | V3-74*01 | D2-21*01 | J5*02 |
| clone 5    | 7      | 2 %    | V3-74*01 | D2-21*01 | J5*02 |
| clone 6    | 5      | 2 %    | V3-74*03 | D5-18*01 | J1*01 |
| clone 7    | 4      | 1 %    | V3-74*01 | D5-18*01 | J5*02 |
| clone 8    | 4      | 1 %    | V3-74*01 | D3-9*01  | J5*02 |
| clone 9    | 3      | 1 %    | V3-74*01 | D3-10*02 | J5*02 |
| clone 10   | 3      | 0,08 % | V3-74*01 | D5-18*01 | J5*02 |