Case 1: Multiple living related donors for a patient without antibodies

- **PIRCHE → SOT → Single patient**

- Recipient

```
OSKAR,HLA-A*01:01:01+HLA-A*33:01:01^HLA-B*08:01:01+HLA-B*14:02:01^HLA-C*07:01:01+HLA-
C*08:02:01^HLA-DRB1*03:01:01+HLA-DRB1*13:01:01^HLA-DQB1*02:01:01+HLA-DQB1*06:03:01
```

- Four candidate donors
  1. one father
  2. one mother
  3. one sister
  4. one brother

```
MAE ,HLA-A*01:01:01+HLA-A*02:01:01^HLA-B*08:01:01+HLA-B*38:01:01^HLA-C*07:01:01+HLA-
C*12:03:01^HLA-DRB1*03:01:01+HLA-DRB1*07:01:01^HLA-DQB1*02:01:01+HLA-DQB1*03:03:02
PAI ,HLA-A*30:01:01+HLA-A*33:01:01^HLA-B*13:02:01+HLA-B*14:02:01^HLA-C*06:02:01+HLA-
C*08:02:01^HLA-DRB1*13:01:01+HLA-DRB1*11:04:01^HLA-DQB1*06:03:01+HLA-DQB1*03:01:01
JOAO,HLA-A*01:01:01+HLA-A*30:01:01^HLA-B*08:01:01+HLA-B*13:02:01^HLA-C*07:01:01+HLA-
C*06:02:01^HLA-DRB1*03:01:01+HLA-DRB1*11:04:01^HLA-DQB1*02:01:01+HLA-DQB1*03:01:01
LUISA  ,HLA-A*02:01:01+HLA-A*33:01:01^HLA-B*38:01:01+HLA-B*14:02:01^HLA-C*12:03:01+HLA-
C*08:02:01^HLA-DRB1*07:01:01+HLA-DRB1*13:01:01^HLA-DQB1*03:03:02+HLA-DQB1*06:03:01
```

- Enter them into the SOT system and calculate the PIRCHE. Compare the outcomes

- Add an uncle and evaluate again

```
Uncle TIO  ,A*11:01:01+HLA-A*33:01:01^HLA-B*07:02:01+HLA-B*14:02:01^HLA-C*07:02:01+HLA-
C*08:02:01^HLA-DRB1*12:02:01+HLA-DRB1*13:01:01^HLA-DQB1*03:01:01+HLA-DQB1*06:03:01
```

- PM: show the heath plots and hover over the items

Case 2: One DCD donor with multiple candidate recipients (no antibodie)

- **PIRCHE → SOT → Donor Allocation**

- DCD donor

```
DON_1, HLA-A*02:01:01+HLA-A*24:02:01^HLA-B*18:01:01+HLA-B*44:05:01^HLA-C*02:02:02+HLA-
C*07:01:01^HLA-DRB1*01:01:01+HLA-DRB1*16:01:01^HLA-DQB1*05:01:01+HLA-DQB1*05:02:01^HLA-
DQA1*01:01:01+HLA-DQA1*01:02:02

Serology: DON_1, A2, A24(9), B18, B44(12), Cw2, Cw7, DR1, DR16(2), DQ5(1)
```

- Four candidate recipient, create four first

```
REC_1, HLA-A*02:01:01+HLA-A*23:01:01:01^HLA-B*18:01:01+HLA-B*27:03^HLA-C*02:02:02:01+HLA-
C*07:04:01^HLA-DRB1*13:02:01+HLA-DRB1*13:03:01^HLA-DQB1*03:01:01+HLA-DQB1*06:04^HLA-
DQA1*01:02+HLA-DQA1*05:05
REC_2, HLA-A*02:01:01+HLA-A*23:01:01^HLA-B*08:01:01+HLA-B*18:01:01^HLA-C*07:01:01+HLA-
C*07:01:01^HLA-DRB1*11:04:01+HLA-DRB1*13:02:01^HLA-DQB1*03:01:01+HLA-DQB1*06:04:01^HLA-
DQA1*01:02:01+HLA-DQA1*05:05:01
REC_3, HLA-A*02:01:01+HLA-A*25:01:01^HLA-B*18:01:01+HLA-B*51:01:01^HLA-C*01:02:01+HLA-
C*12:03:01^HLA-DRB1*15:01:01+HLA-DRB1*11:01:01^HLA-DQB1*03:01:01+HLA-DQB1*06:02:01^HLA-
DQA1*01:02:01+HLA-DQA1*05:05:01
REC_4, HLA-A*01:01:01+HLA-A*02:01:01^HLA-B*08:01:01+HLA-B*07:02:01^HLA-C*07:02:01+HLA-
C*07:01:01^HLA-DRB1*03:01:01+HLA-DRB1*01:01:01^HLA-DQB1*02:01:01+HLA-DQB1*05:01:02^HLA-
DQA1*02:01:01+HLA-DQA1*01:02:01
```

- Enter them into the SOT system and calculate the PIRCHE. Compare the outcomes and store them

Case 3: RAMP evaluation

- **PIRCHE → SOT → RAMP**

- Use the data from recipient 1, 2, 3, and 4 from case 2 and plot a RAMP
- Evaluate whether this donor is good or bad donor in a relative way. Do this by checking the actual PIRCHE scores from case 2 with the RAMP histograms

Case 4: Adding unacceptables to the RAMP for a patient without antibodies

- **PIRCHE → SOT → RAMP**

- Enter the typing (recipient 4)
- `REC_4, HLA-A*01:01:01+HLA-A*02:01:01^HLA-B*08:01:01+HLA-B*07:02:01^HLA-C*07:02:01+HLA-C*07:01:01^HLA-DRB1*03:01:01+HLA-DRB1*01:01:01^HLA-DQB1*02:01:01+HLA-DQB1*05:01:02^HLA-DQA1*02:01:01+HLA-DQA1*01:02:01`
- Create a RAMP
- Select unacceptables to get into a vPRA of ~ 50%
- Check the distribution of the risk classifications

Case 5: Adding unacceptables to the RAMP for a patient with antibodies

- **PIRCHE → SOT → RAMP**

- Enter the typing
- `HLA-A*02:01:01+HLA-A*03:01:01^HLA-B*35:01:01+HLA-B*51:01:01^HLA-C*04:01:01+HLA-C*14:02:01^HLA-DRB1*01:01:01+HLA-DRB1*07:01:01^HLA-DQB1*02:02:01+HLA-DQB1*05:01:01^HLA-DQA1*01:01:01+HLA-DQA1*02:01:01`
- Add the MFI data → **get from file *epitopes_class_I.csv***
- Select from which run you want to evaluate the data
- Select unacceptables to create a pattern that suits you
- Evaluate the RAMP