Immunogenicity Assays Working Group Update

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Merck Sharp & Dohme Corp.

On behalf of the IMG Assays Working Group

Linlin Luo, Assay Working Group Lead

Mission Statement

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European Immunogenicity Platform

- The **Immunogenicity Assays Working Group** is part of the Strategy Working Group and was founded in 2021.
- The Working Group currently meets every 3 weeks for 1hour.
- The goal of the Working Group is for the members to exchange their company's practices on immunogenicity assay related topics and work to publish industry best practices as recommended by EIP.
- Currently, discussion topics include all stages of humoral immunogenicity, or anti-drug antibody (ADA) assays, including assay cross-validation

Who Are We?


EIP
European Immunogenicity Platform
Martin
Ullmann
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Pfizer
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Karin
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Linlin
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Issa
Jyamubandi
AMGEN
Luo
Stefanie
Elm
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Marina
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Tovey
Michael
AiCuris
Anti-infective Cures
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BIONTECH
BioAgilytix
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Champion
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SANDOZ
Wibke Lembke
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Gnana Rajaraman
Katrin
Deiser
Daniel
Neumann
Jo
Alison
Matthias Reichel
Baltrukonis
Goodman
Johnson
celerion
Translating Science to Medicine
Joanna Grudzinska-Goebel

2024 Goals

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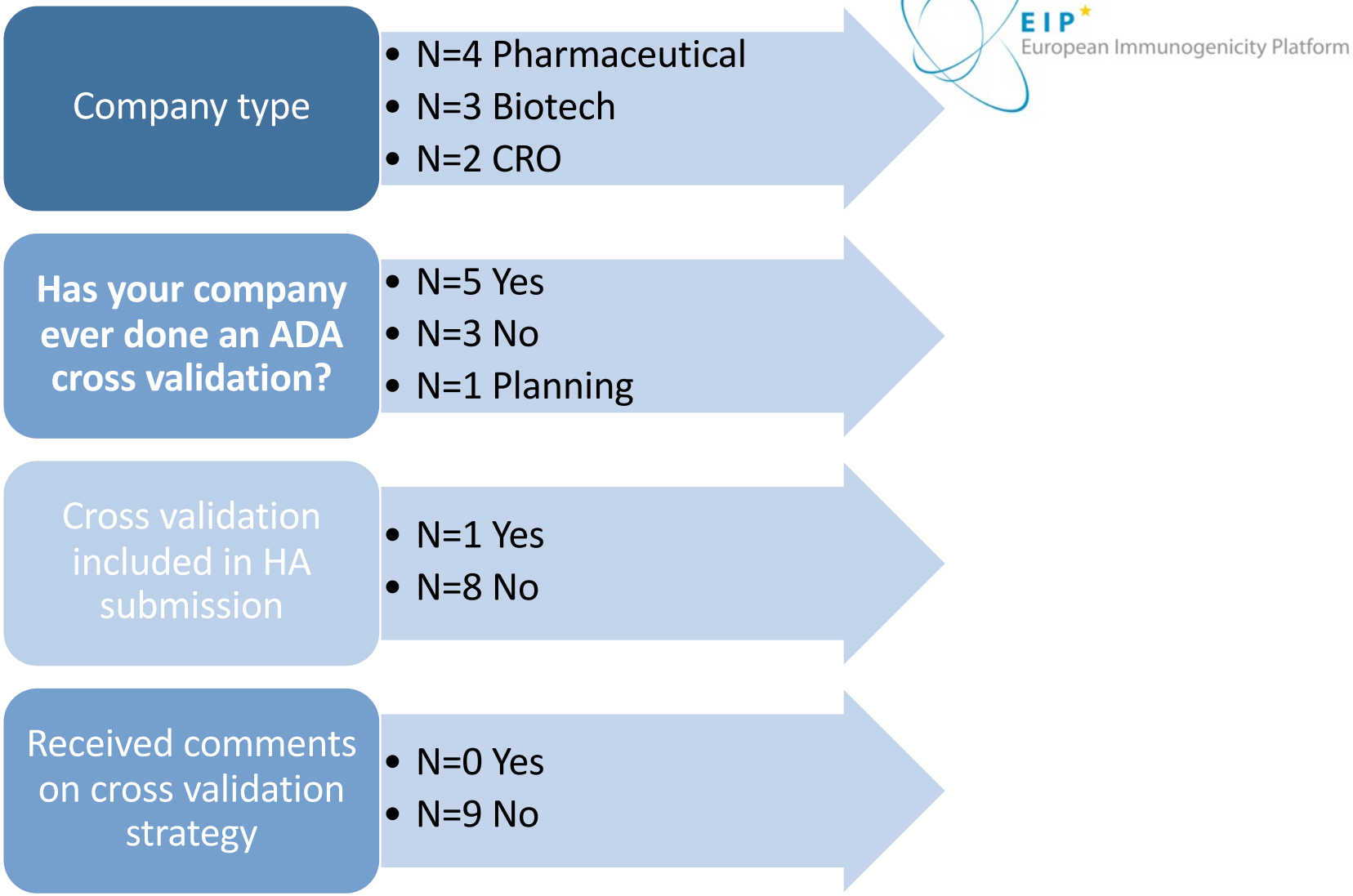
Cross validation practices survey:

- Distributed in 2024
- Responses so far

Preliminary Survey Results



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Preliminary Survey Results

When do you perform cross validations?
For the same program but different clinical studies

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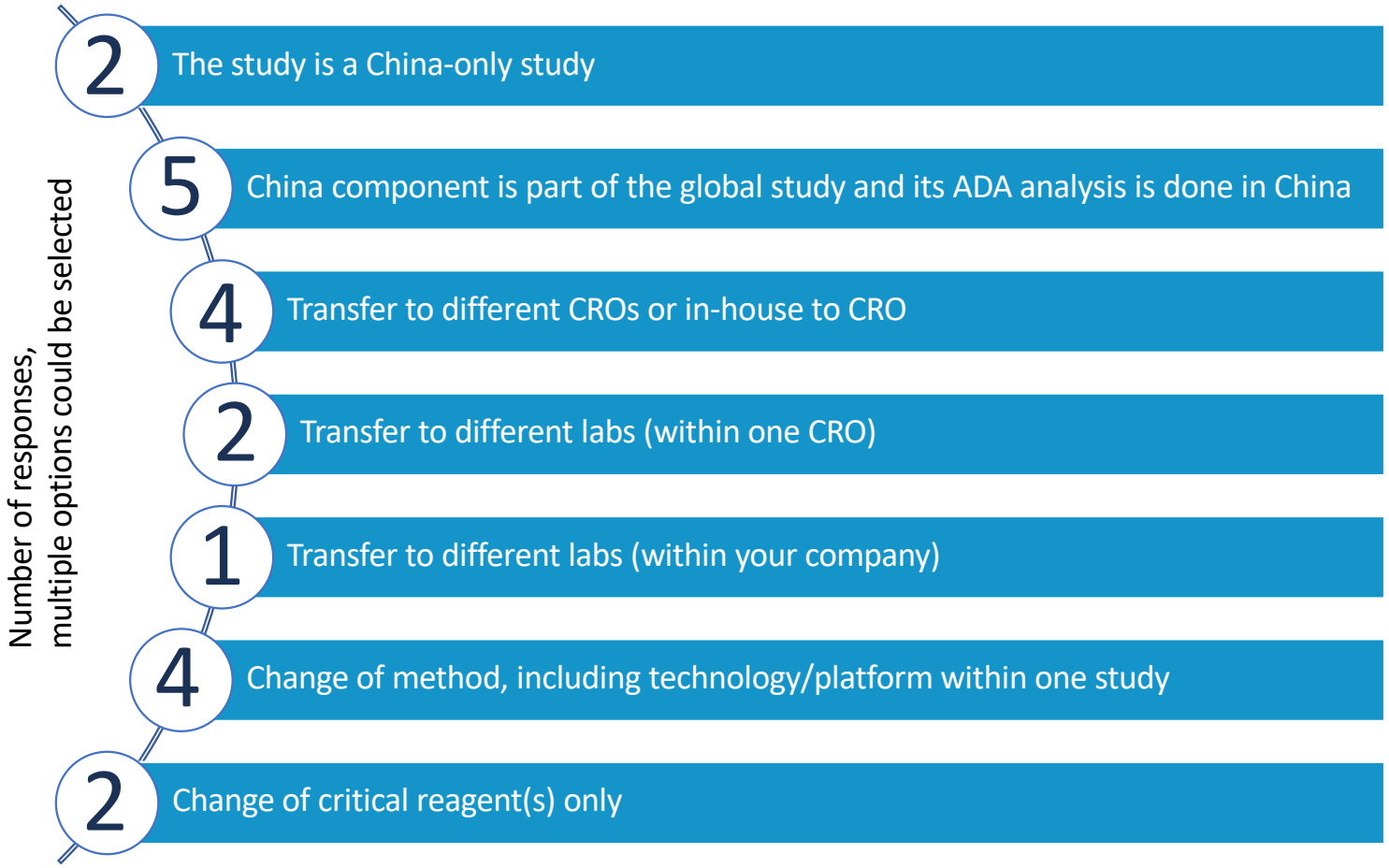

Preliminary Survey Results

When do you perform cross validations?
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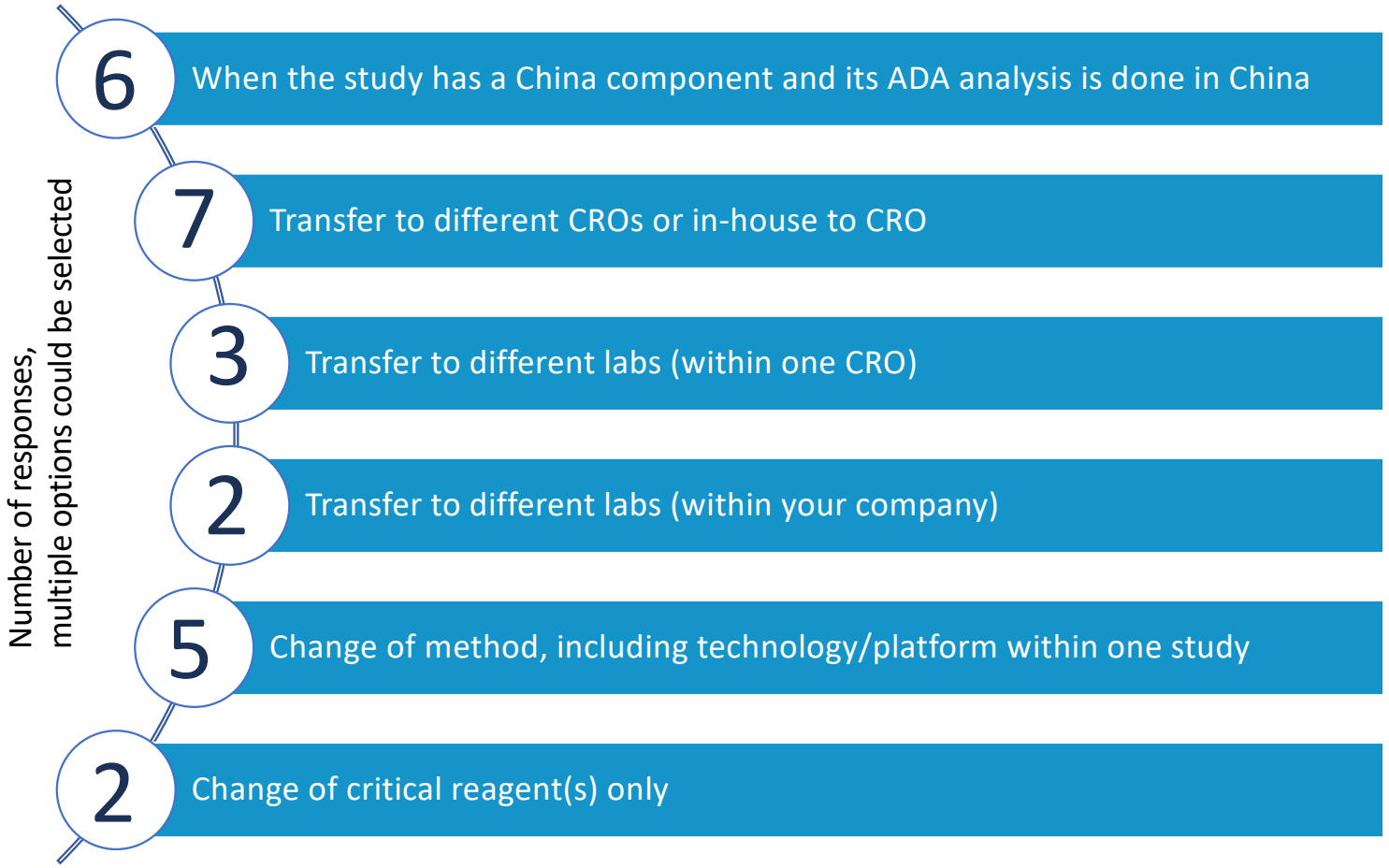

Preliminary Survey Results

When do you NOT perform cross validations?
For the same program but different clinical studies

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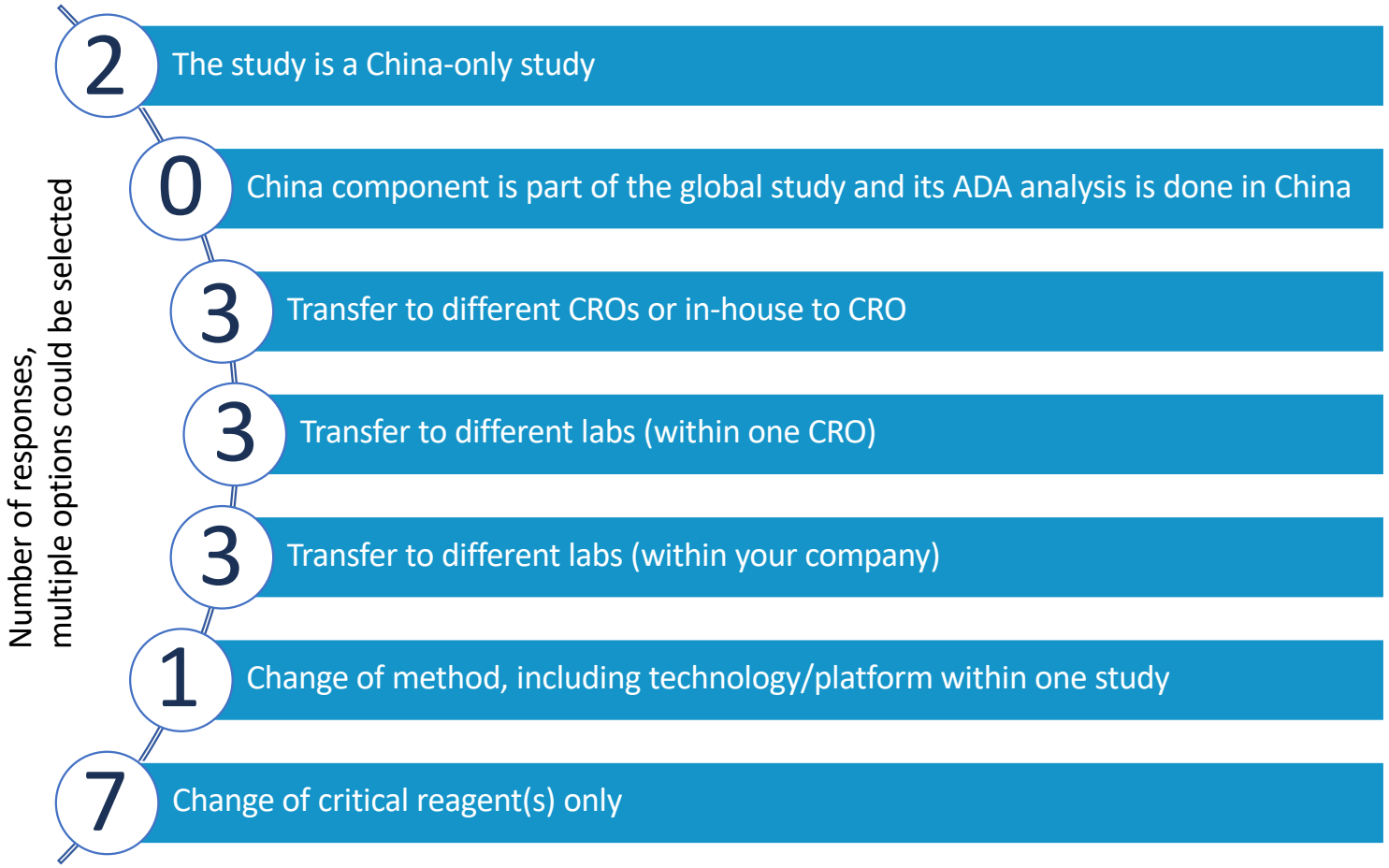

Preliminary Survey Results

When do you NOT perform cross validations?
For the same clinical study

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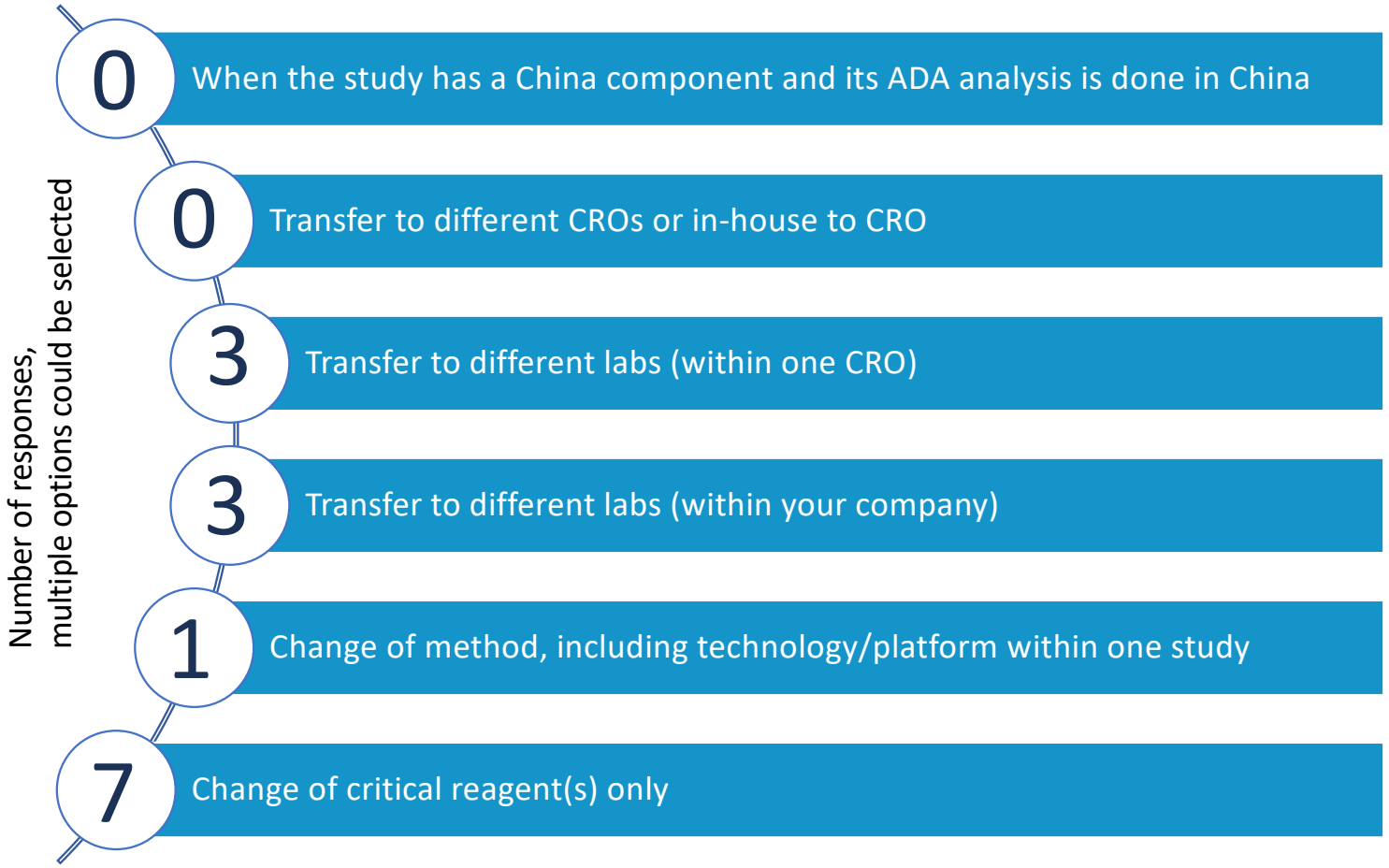

Preliminary Survey Results

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For ADA cross validation when China is <u>not</u> involved, what type of samples do you use?

- N=3 never done
- N=2 incurred samples
- N=4 spiked samples
- N=2 both spiked and incurred

For ADA cross validation when China is involved, what type of samples do you use?

- N=3 never done
- N=0 incurred samples
- N=5 spiked samples
- N=1 both spiked and incurred

Preliminary Survey Results

How do you assess the success of a cross validation?

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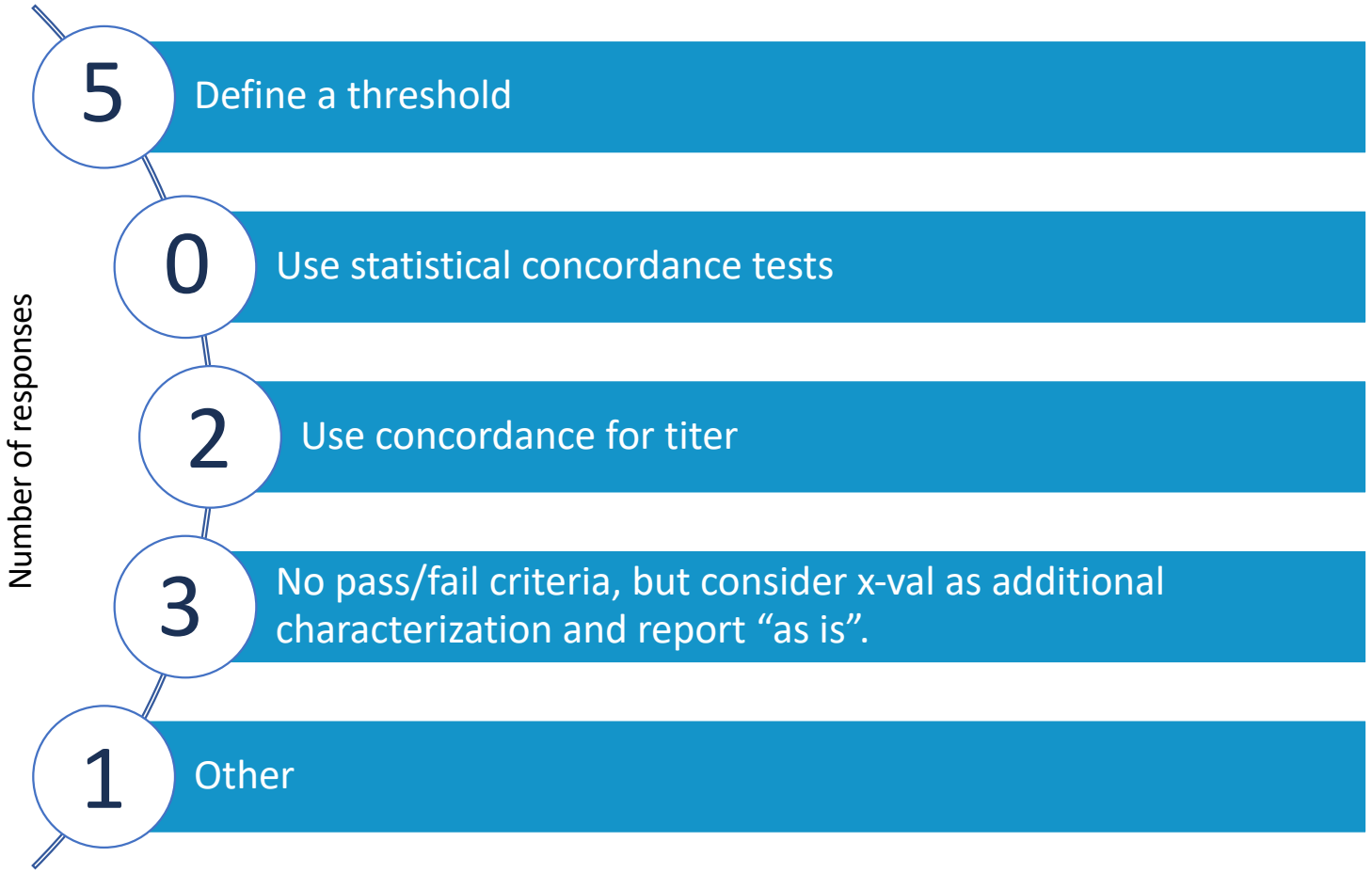

Preliminary Survey Results

What do you do when a cross validation fails?

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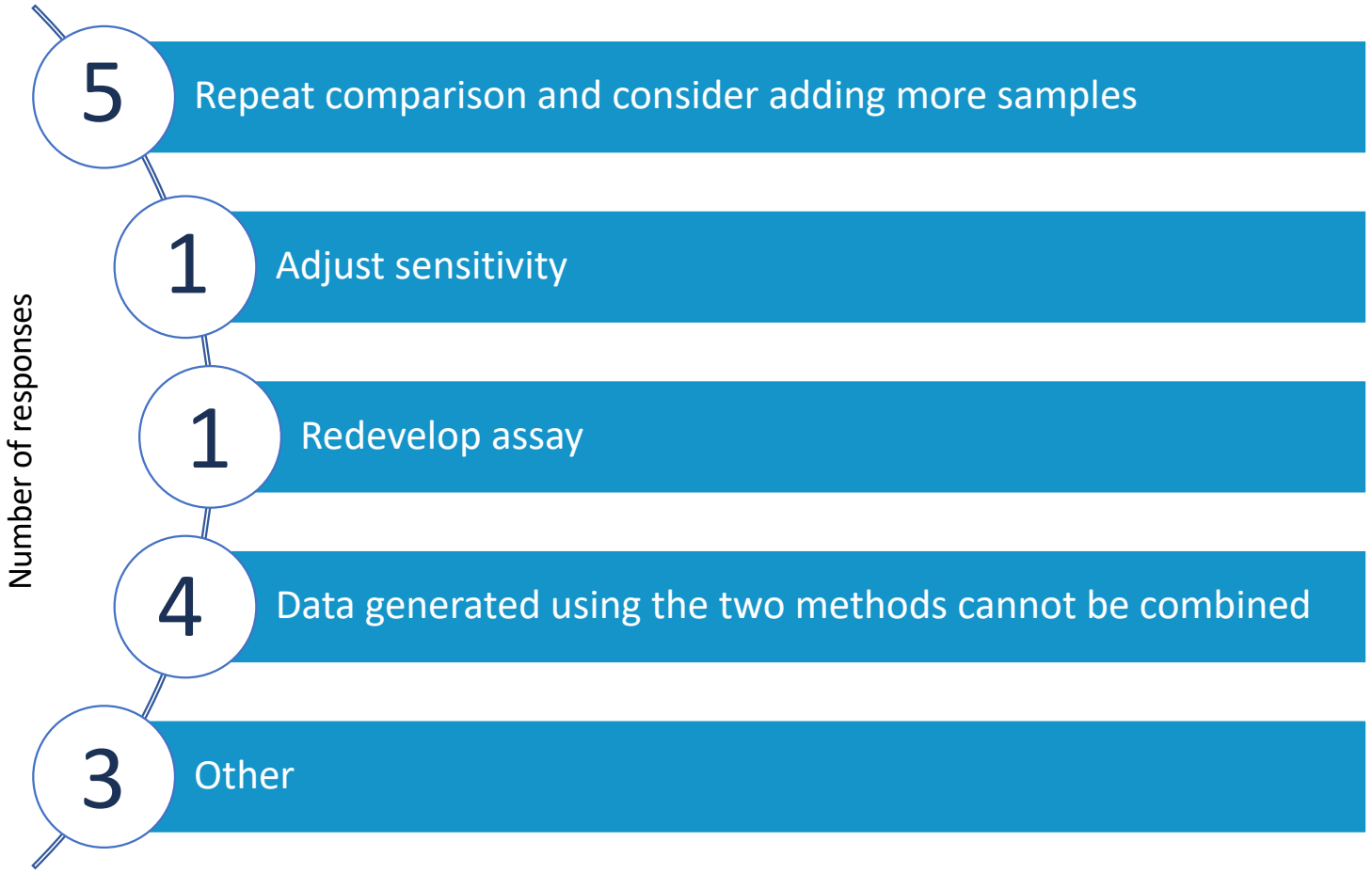

Preliminary Survey Results

Assess titer results	• N=3 Yes • N=2 No • N=3 Sometimes
Assess drug tolerance	• N=4 Yes • N=3 No
If a method has NOT been validated at both sites	• N=1 Yes • N=7 No

Preliminary Survey Results

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How many ADA positive samples are necessary?

- 5 - 30
- HPC/TPC
- LPC/100ng/mL

How many ADA negative samples are necessary?

- 5 - 33
- Exclude pre-existing

2024/2025 Goals

A manuscript on cross-validation (*Perspective*)

- *"…perception that this might be important for regulatory agencies with newer programs…"*
- *"Having guidance from the EIP on situations when a cross validation is critical and how to perform and to assess its results and its impact on clinical study results would be appreciated."*
- Lack of regulatory guidance
- Survey, overview of practices across companies or published
- Description and discussion/comparison of different approaches, highlighting requirements, key differences and similarities, tools and reporting strategies for the statistical comparison
- Provide recommendations if possible
- Targeting to send to *Bioanalysis*

Thank You!

If you need additional information or would like to join Immunogenicity Assays Working Group, please contact

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15th Open Scientific EIP Symposium on Immunogenicity of Biopharmaceuticals

22nd — 24th April 2024

Lisbon, Portugal