

CDC Screening: overview from the survey

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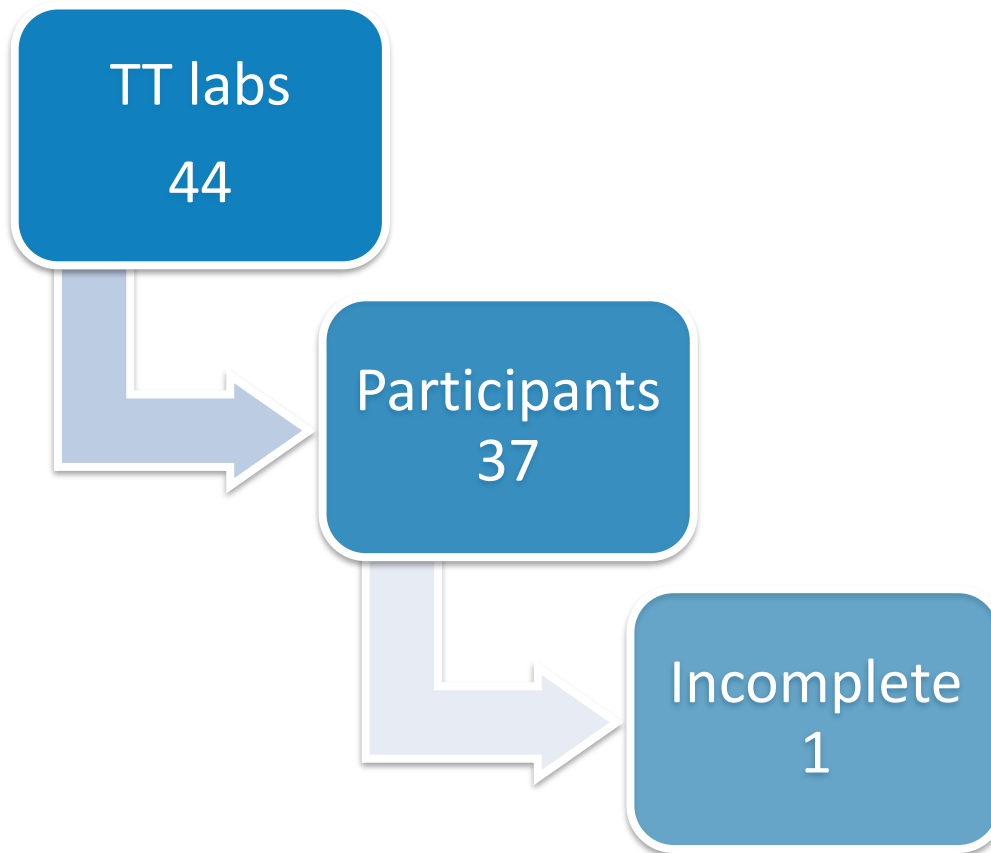
EXTRA MURAL MEETING 2023



- “A complement dependent cytotoxicity (CDC) screening for HLA specific antibodies must be done at least once a year.”
ET manual Chapter 10
- CDC is regarded as an important technique for the definition of clinically relevant antibodies
- CDC screening permits interpretation of the CDC crossmatch
- CDC reactivity is a prerequisite for inclusion into the AM program
- Therefore, it is important that all laboratories performing CDC screening retain their expertise



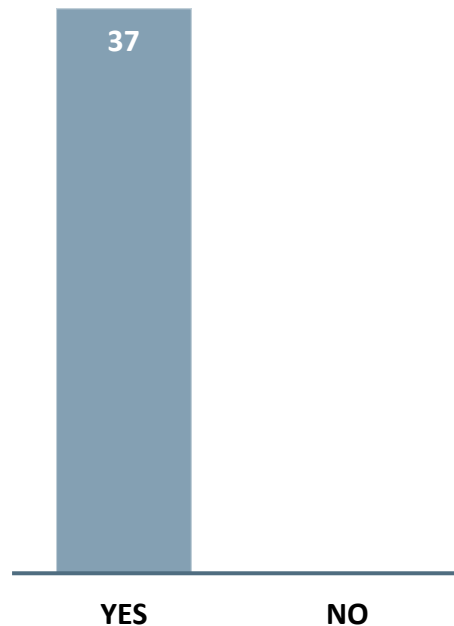
Inventory of the current status and future of CDC screening for detection and identification of HLA-specific antibodies in all Eurotransplant affiliated laboratories



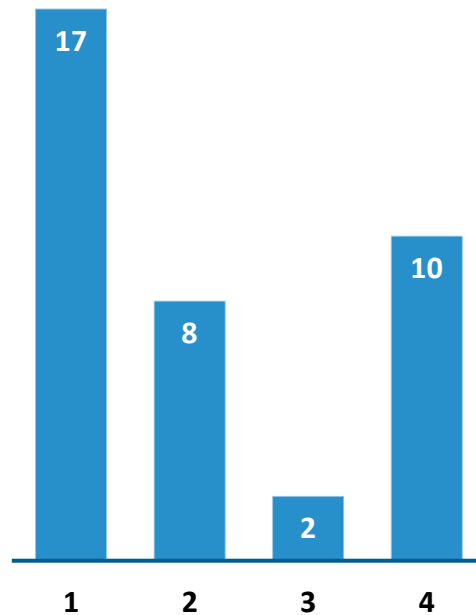
Frequency of CDC screening



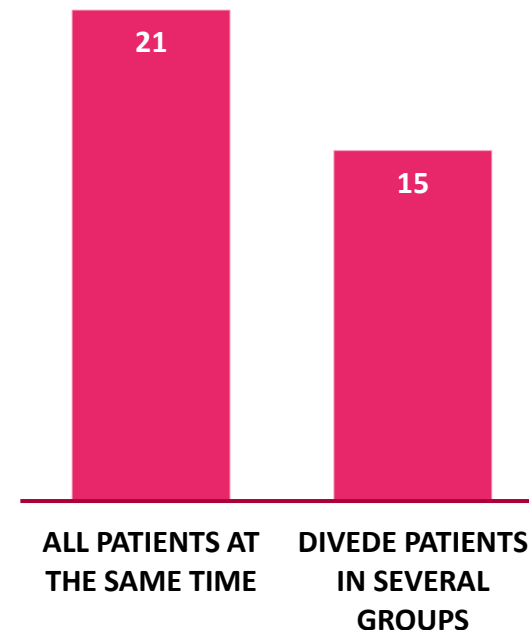
Do you use CDC screening for all your patients on the waiting list as described in ET manual?



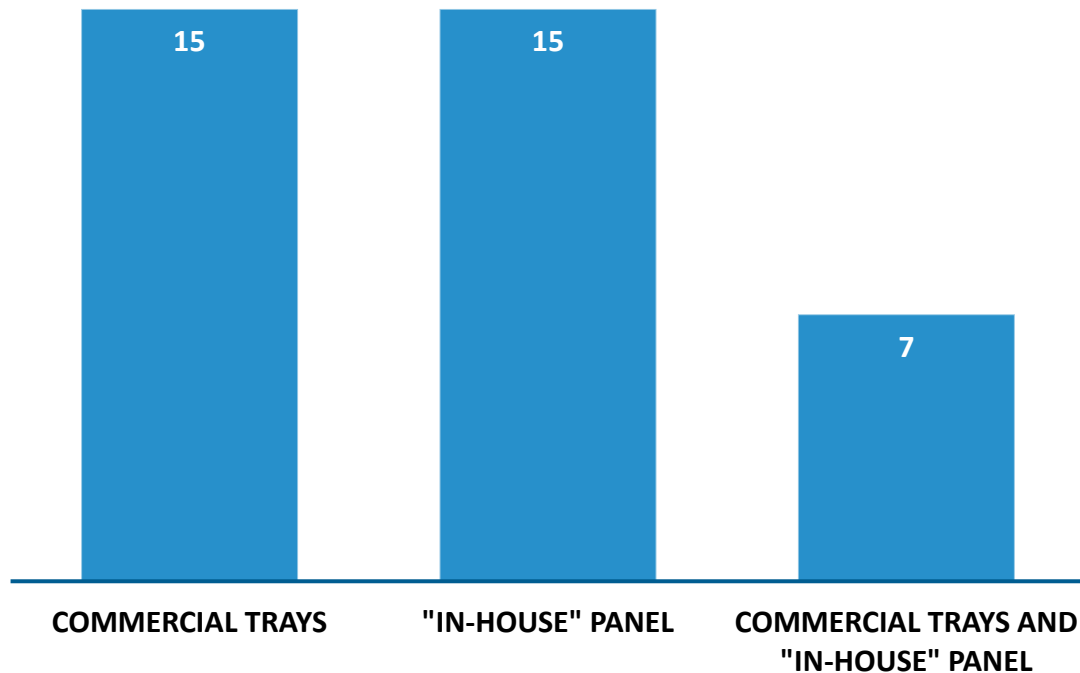
How many times/year do you perform CDC screening for patients on the waiting list?



Do you perform CDC screening for all patients at the same time or divided in several groups?



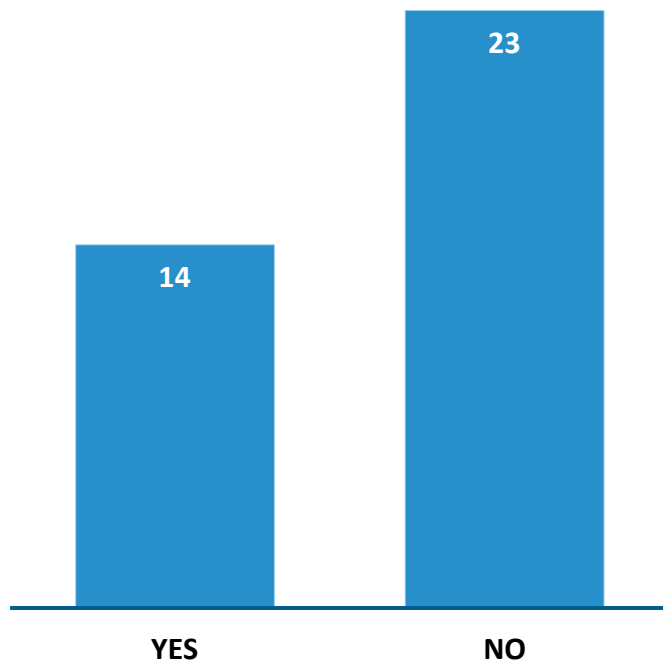
"In-house" panel vs commercial trays



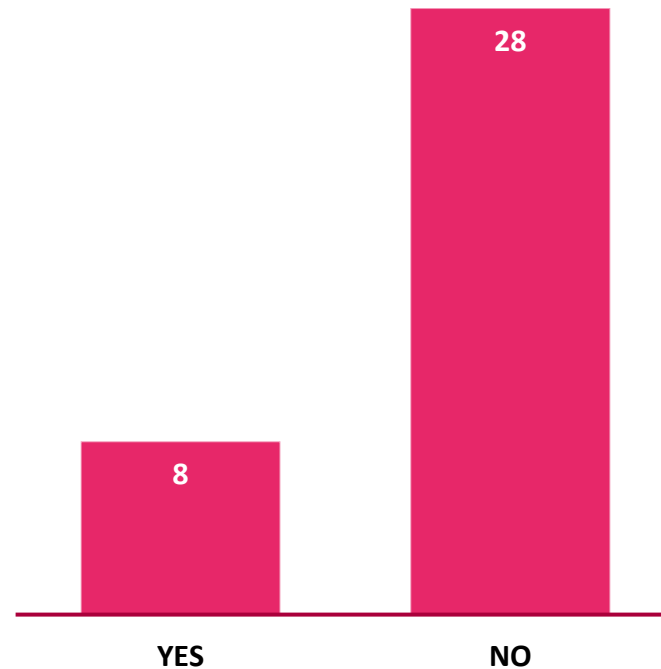
The use of automated systems



Do you use an automated system to dispense serum/cells?



Do you use an automated system to read the results?



Automated systems used



Dispense cells

- Lambda Dot & Jet

Dispense serum

- 60 syringes serum dispenser (Greiner)
- Automatic Seradot
- Automatic Serum Dispenser
- Biotest Seradot OF-2
- Liquid Handler (Hamilton STAR)
- Mantis Liquid Dispenser

Reading

- Lambda Scan
- Patimed

Evaluation

- Semiautomated evaluation
- Interface between microscope and in-house laboratory software

Technical aspects of CDC screening

Serum pre-treatment	<ul style="list-style-type: none">• Yes: 11%• No: 89%
Number of cells	<ul style="list-style-type: none">• 1.000 – 7.000 cells• 40.000 cells
Volume of serum	<ul style="list-style-type: none">• 1µl (overall)• 2µl
Cell-serum incubation	<ul style="list-style-type: none">• 30 min (33/36)• 25 min (1/36)• 45 min (1/36)• 30 or 60 min (1/36)
Complement incubation	<ul style="list-style-type: none">• 60 min (33/36)• 90 min (2/36)• 60 or 120 min (1/36)

Vendor

- BAG
- BioRad
- CTS Heidelberg
- One Lambda

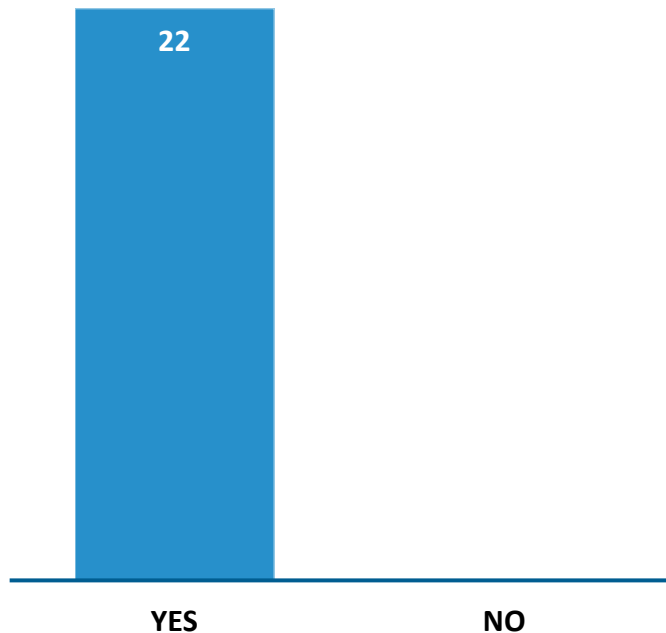
How many different HLA – typed donor cells suspension does the commercial tray contain?

- 56
- 58
- 60

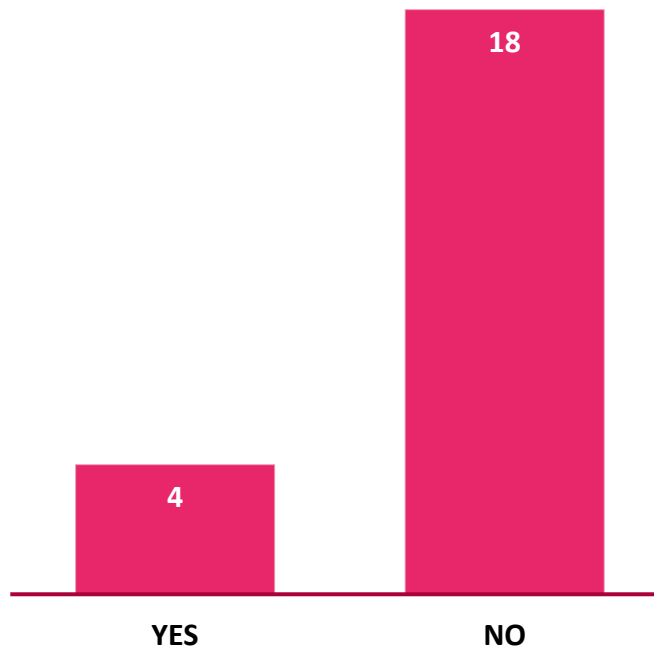
CDC screening using commercial trays



Does the panel cover the most common HLA types in the ET donor population?



Are frequently occurring antigens missing from your cell panel?



In-house panel for CDC screening

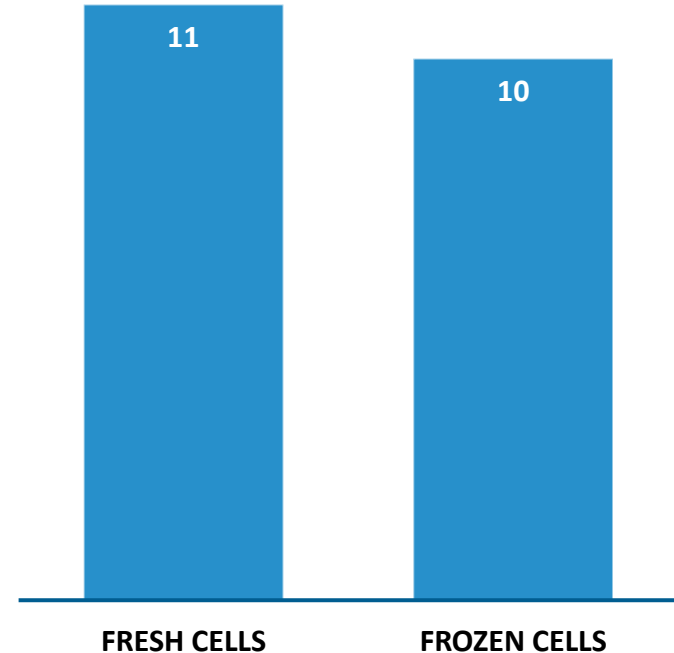
Terasaki Trays

- Greiner Bio-One
- Nunc

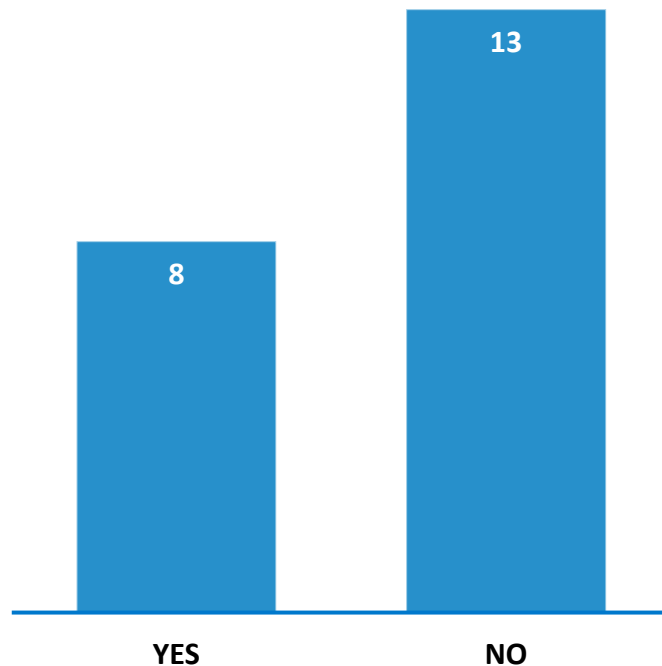
Staining method

- Bromphenol blue
- CFDA
- Eosin
- Acridine Orange
- Ethidium Bromide
- Fluoroquench
- Propidiumjodide ink
- Stainfix
- Trypan Blue / Eosin Y

Fresh or frozen cells?



Does your "in-house" cell panel vary in size?



How many different HLA-typed cells does your in-house panel contain?

- 25
- 30
- 50
- 54
- 58
- 60
- 100

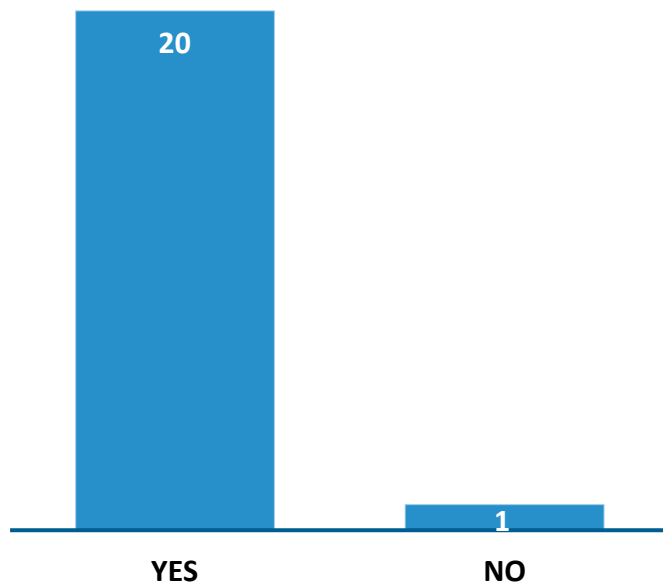
Min – max number of cells

- 35 – 65
- 40 – 60
- 24 – 54
- 50 – 60
- 52 – 58
- 50 – 56

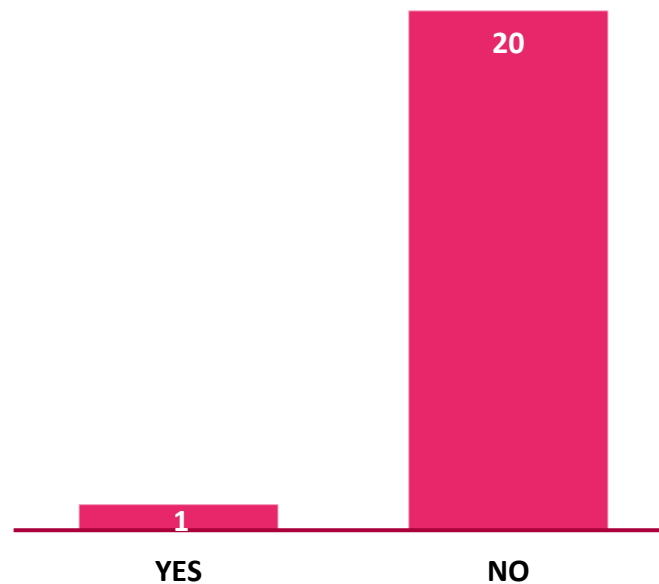
In-house panel for CDC screening



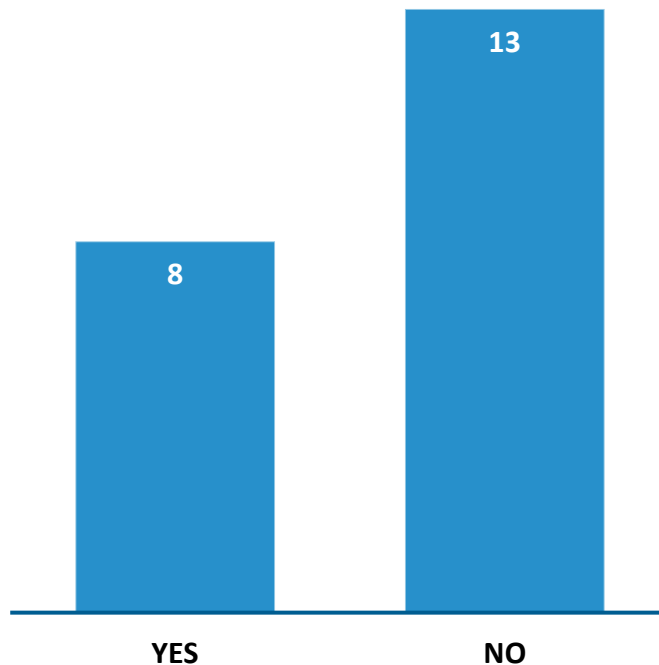
Does the panel cover the most common HLA types in the ET donor population?



Are frequently occurring antigens missing from your cell panel?



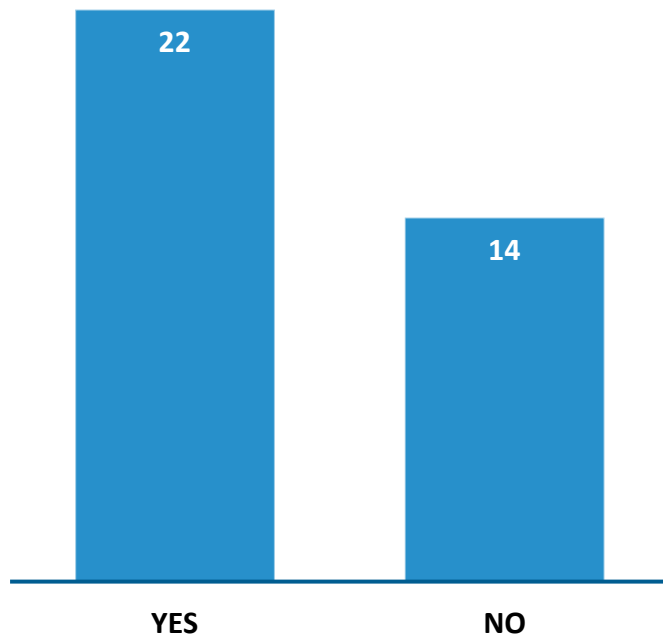
Do you have your in-house CDC screening test ISO15189 certified?



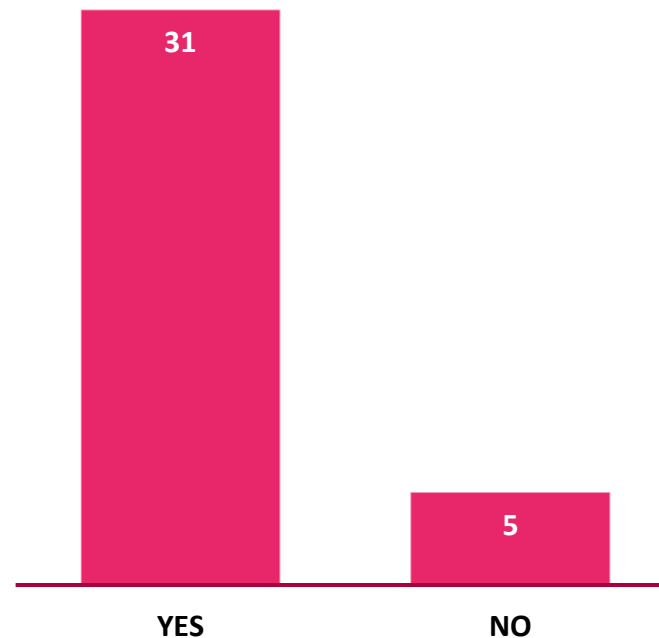
CDC screening for sensitized patients



Would you be in favor to change the mandatory annual CDC screening for all patients to only sensitized patients?



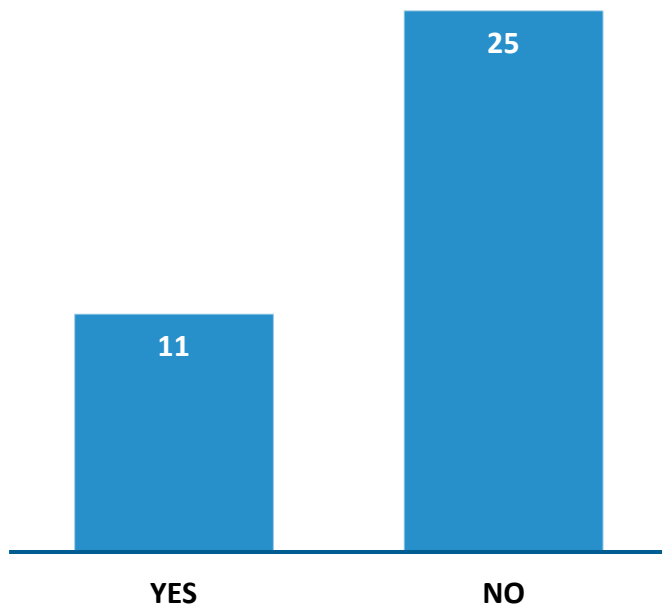
If the annual CDC screening would be only required for sensitized patients, do you expect to retain sufficient expertise in the technique?



Alternatives for CDC screening



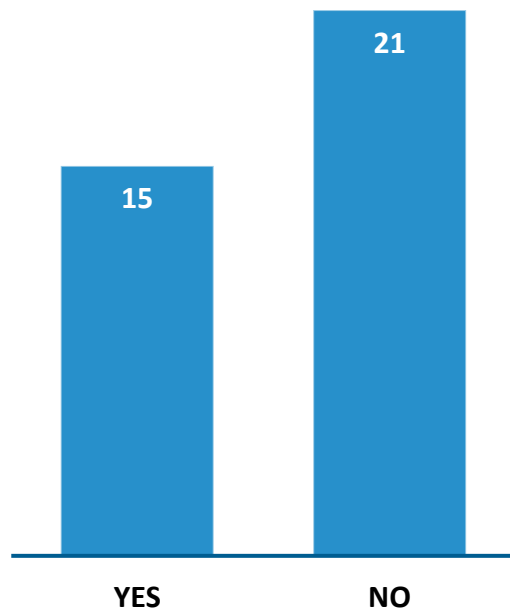
**Do you think C1q or C3d based Luminex could
replace CDC screening?**



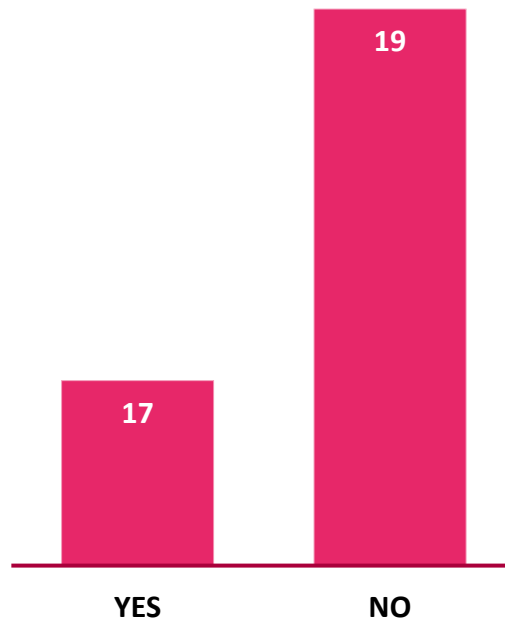
Future needs



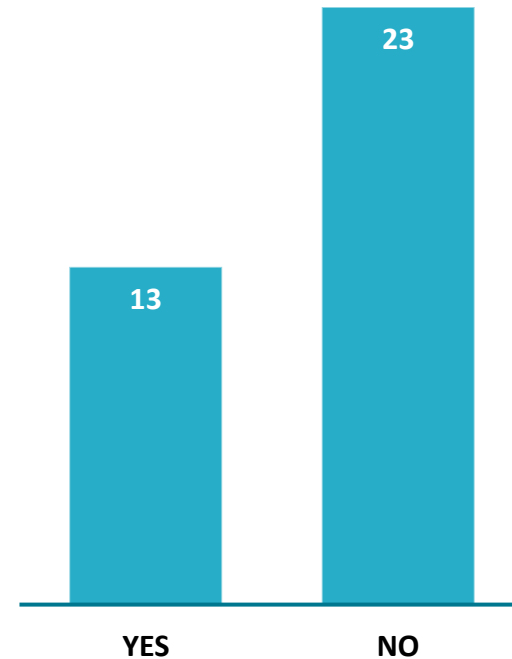
Would you be interested in a machine for dispensing cells/cysteine/complement etc?



Would you be interested in an automated reader for Terasaki trays?



Would you need/like help from ETRL to continue CDC screening?



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