

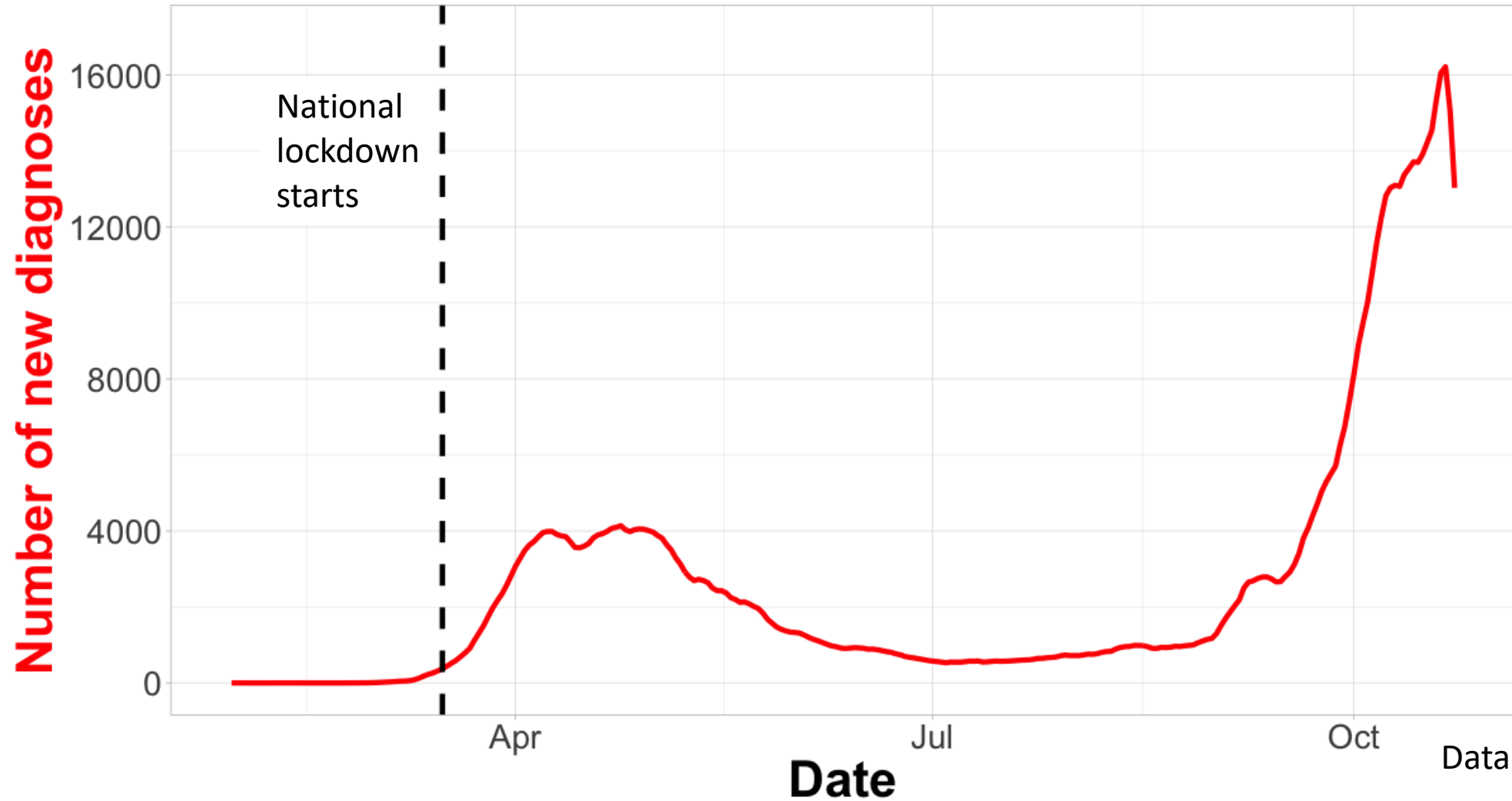
Transplantation in the time of COVID

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Oxford Transplant Centre

National picture - new COVID diagnoses



Data source: gov.uk

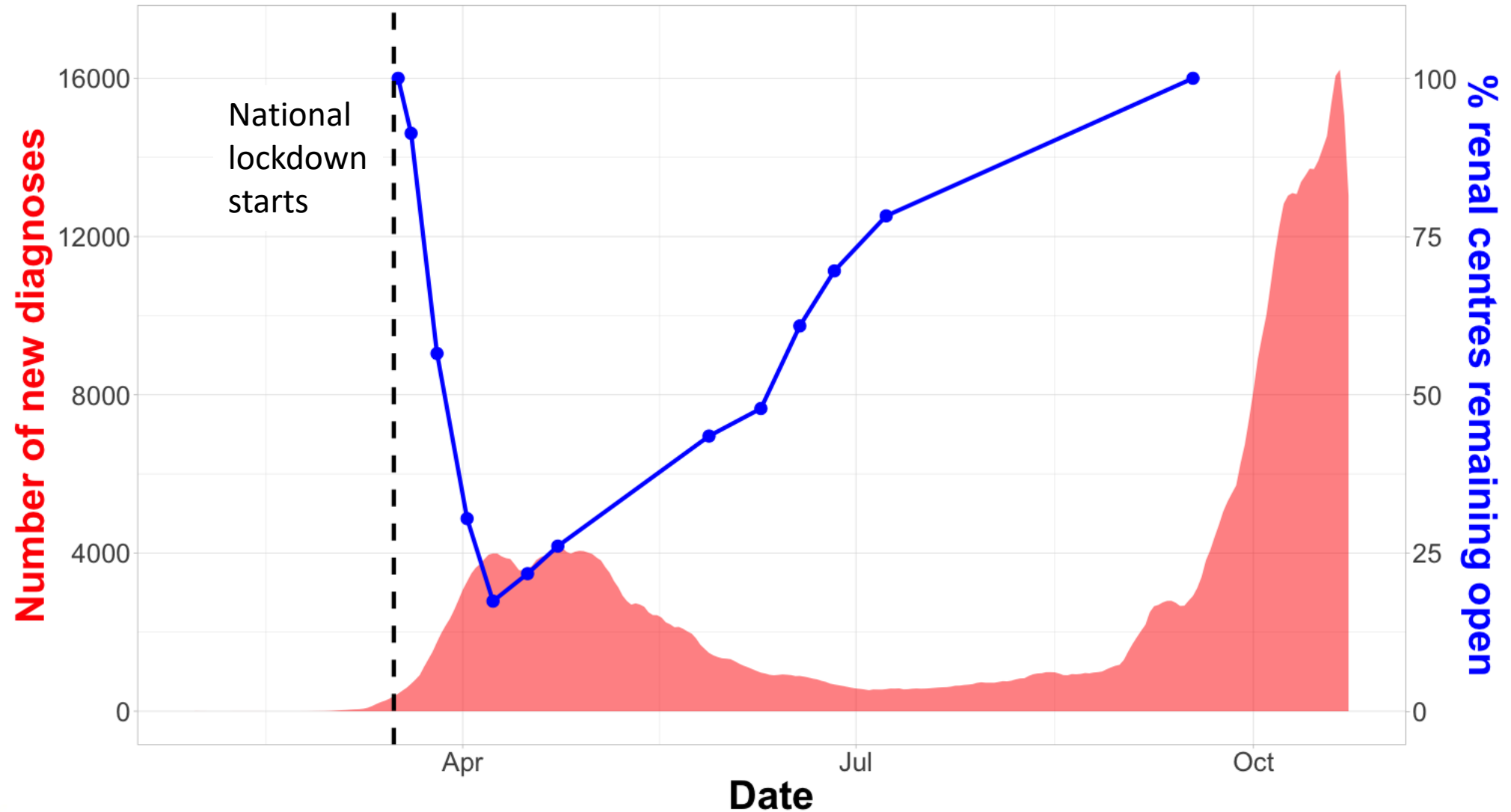
National context

Widespread changes to organ donation and transplantation:

- 23rd March – aim to reduce retrieval and transplant by 50% by declining all DBD donors 60+, and all DCD donors 50+
- 26th March:
 - 13/23 adult kidney transplant centres remain open
 - 8/8 pancreas centres closed
- 6th April:
 - 4/23 adult kidney transplant centres remain open

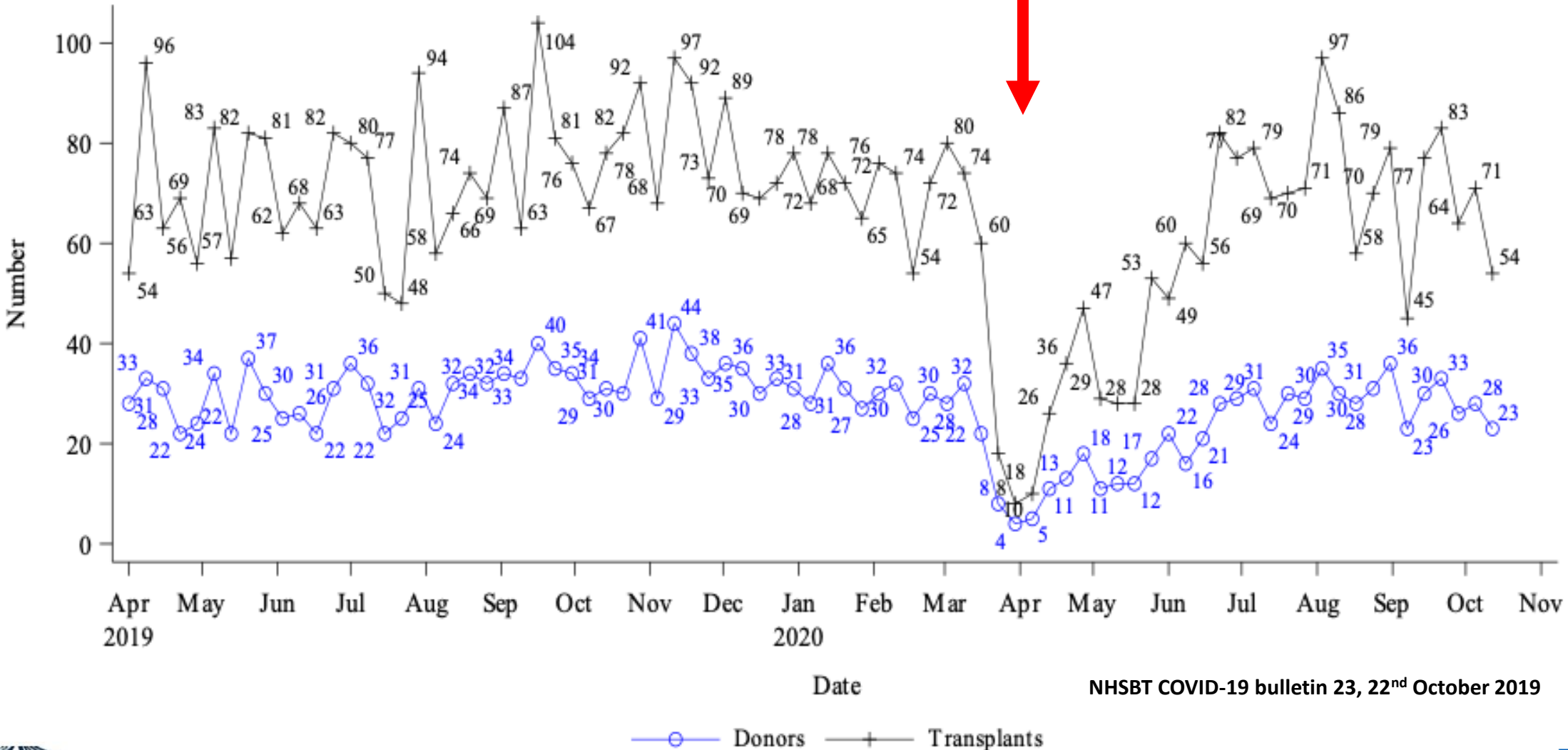
Organ and Tissue Donation and Transplantation Directorate COVID-19 bulletins 3 and 4

National picture - renal transplant centres



n=23; data taken from NHSBT COVID-19 bulletins

Figure 1 Effect CoVID-19 has on Deceased Donation and Transplantation
Number of deceased donors and transplants by week since 1 April 2019

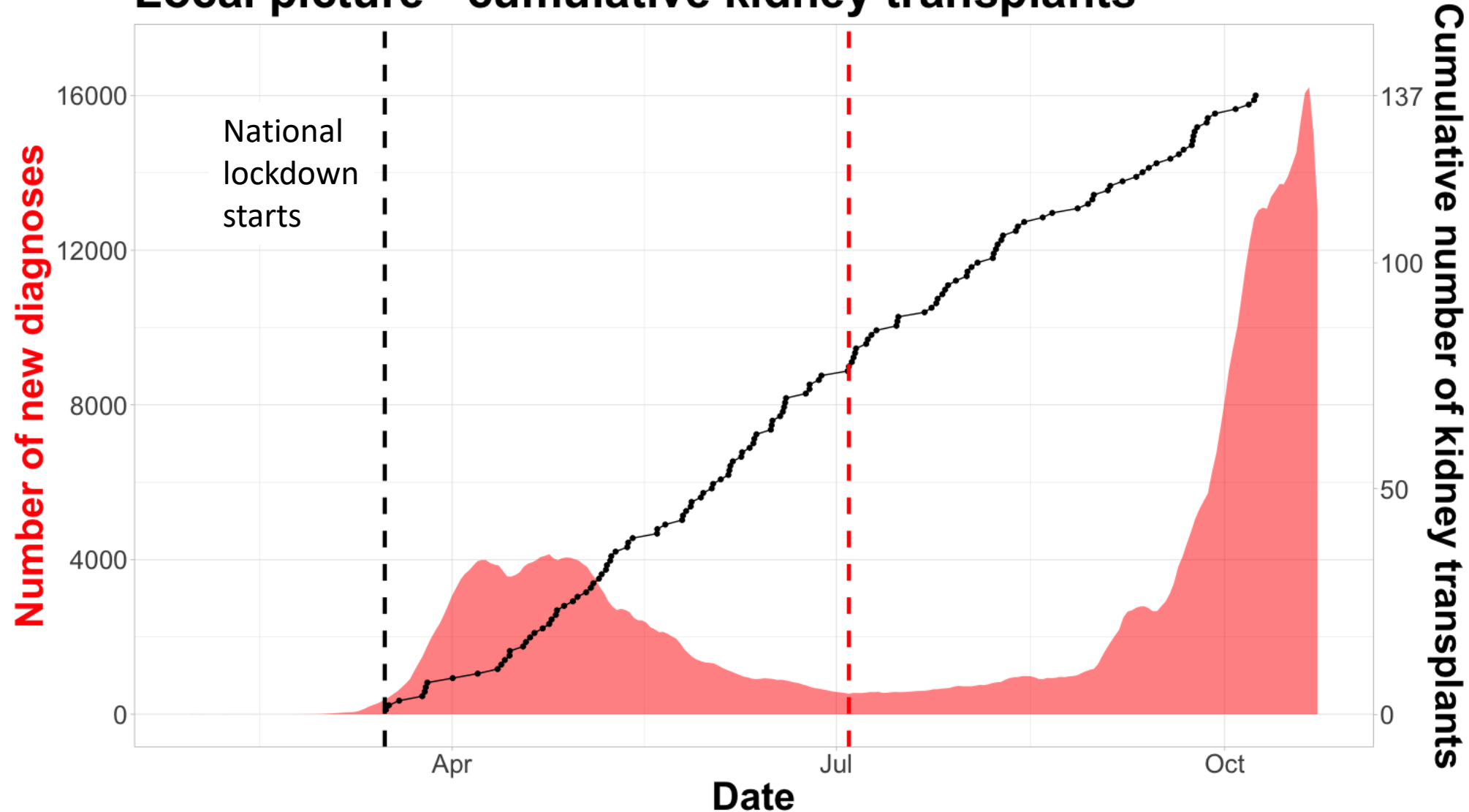


NHSBT COVID-19 bulletin 23, 22nd October 2019

Oxford Transplant Centre remains open

- Clean (Covid-Light) site
- Robust donor evaluation
- Continued review and refinement of waiting list/ suspensions
- Suspension of the pancreas and living donor programs
- CT chest on arrival (until availability of rapid PCR testing)
- Modified induction immunosuppression with non-lymphocyte depleting antibody (Basiliximab).
- Virtual follow up clinics

Local picture - cumulative kidney transplants



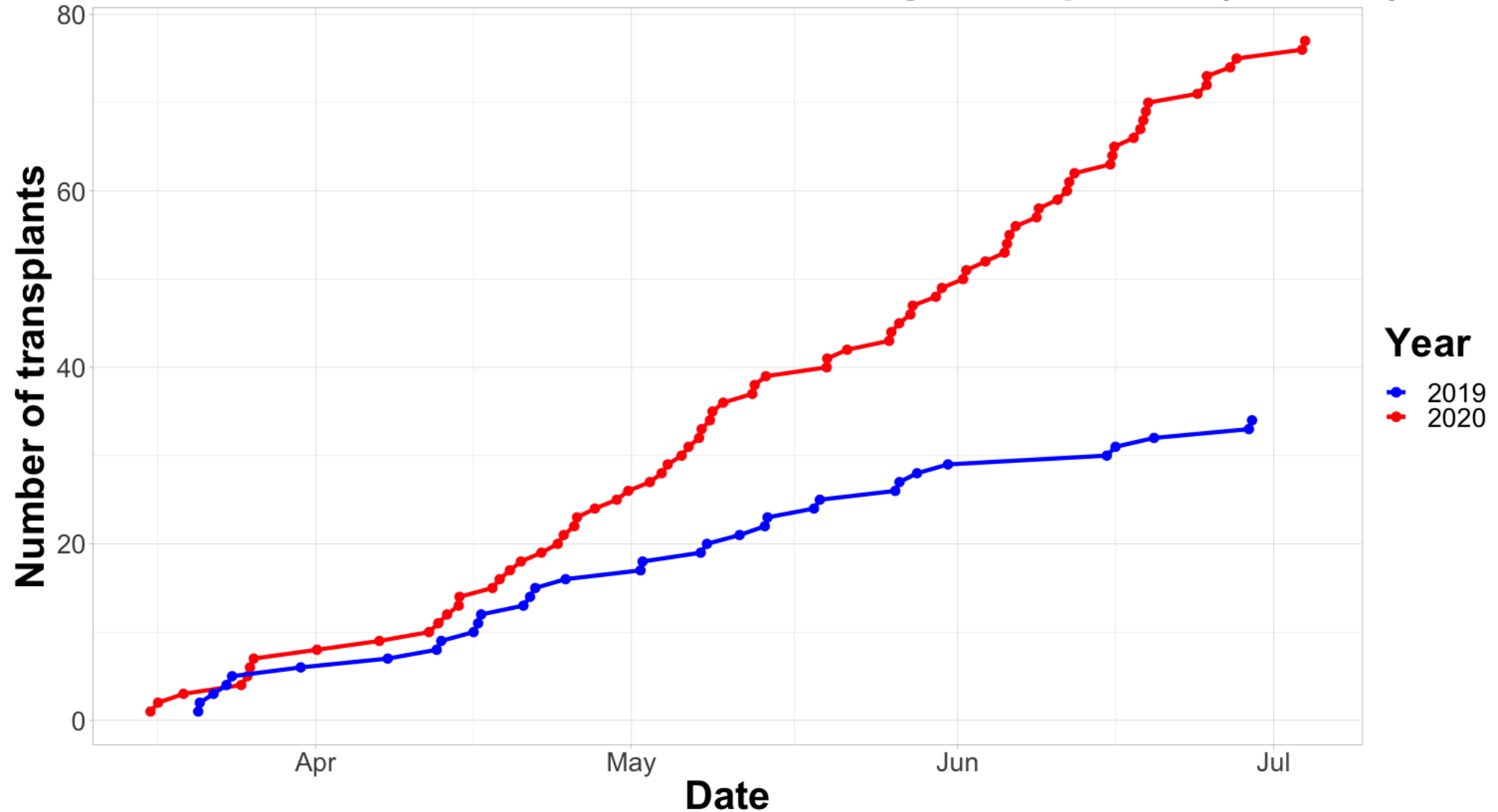
Preliminary review (13/05/2020)

Parameter	N=38 transplants
Donor Age, years (mean \pm SD)	40.1 \pm 13.8
Donor Type (DBD/DCD)	27/11
Recipient Age, years (mean \pm SD)	49.8 \pm 12
First Transplant/Retransplant	31/7
Cold ischemia time, hours (mean \pm SD)	15.6 \pm 5.5
Overall Delayed Graft Function (DGF) rate*	9/31 (29%)
Functioning graft at date of discharge (dialysis independence) [†] n (%)	31/35 (88.6%)
Functioning graft at date of data extraction (dialysis independence) [†] n (%)	35/35 (100%)
Length of hospital stay, days (median, range)	5 (3-12)
Follow up duration, days (median, range)	20 (1-58)
Acute Rejection episodes	0
COVID-19 or SARS-CoV-2 Positive recipients post transplant	0

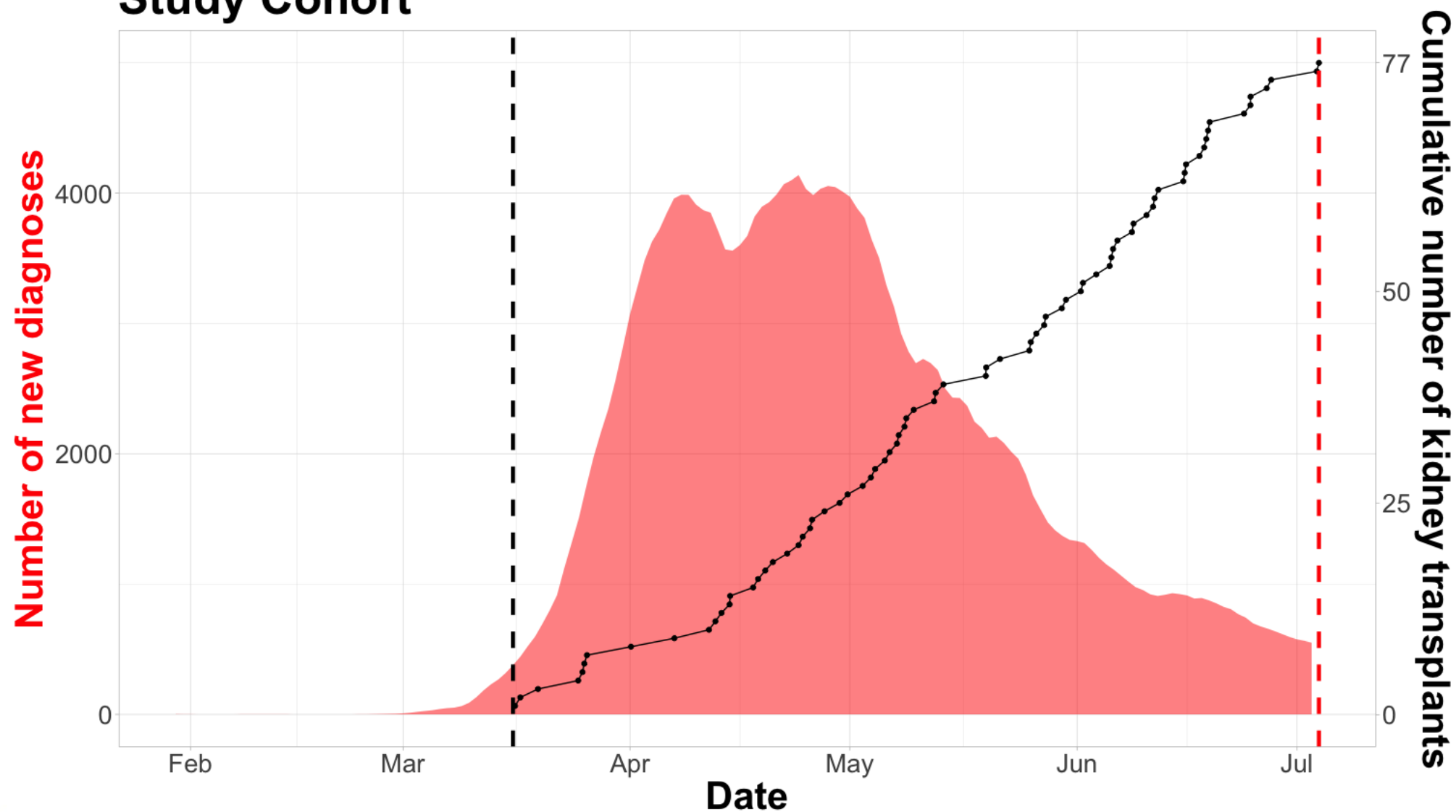
Preliminary review (13/05/2020)

Total number of potential recipients called in for transplant		51
Potential recipients that were cancelled prior to transplantation, by reason (n=13, 25.5%)	Unfit unrelated to COVID (high anaesthetic risk; active non-COVID infection)	5 (9.8%)
	Asymptomatic, CT suspicious for COVID, swab negative	4 (7.8%)
	Asymptomatic, CT suspicious for COVID, swab positive	1 (2%)
	Incidental finding on CT precluding transplantation	1 (2%)
	Unknown, excluded on screening phone-call	2 (3.9%)

2019 vs 2020 deceased-donor kidney transplants (Oxford)



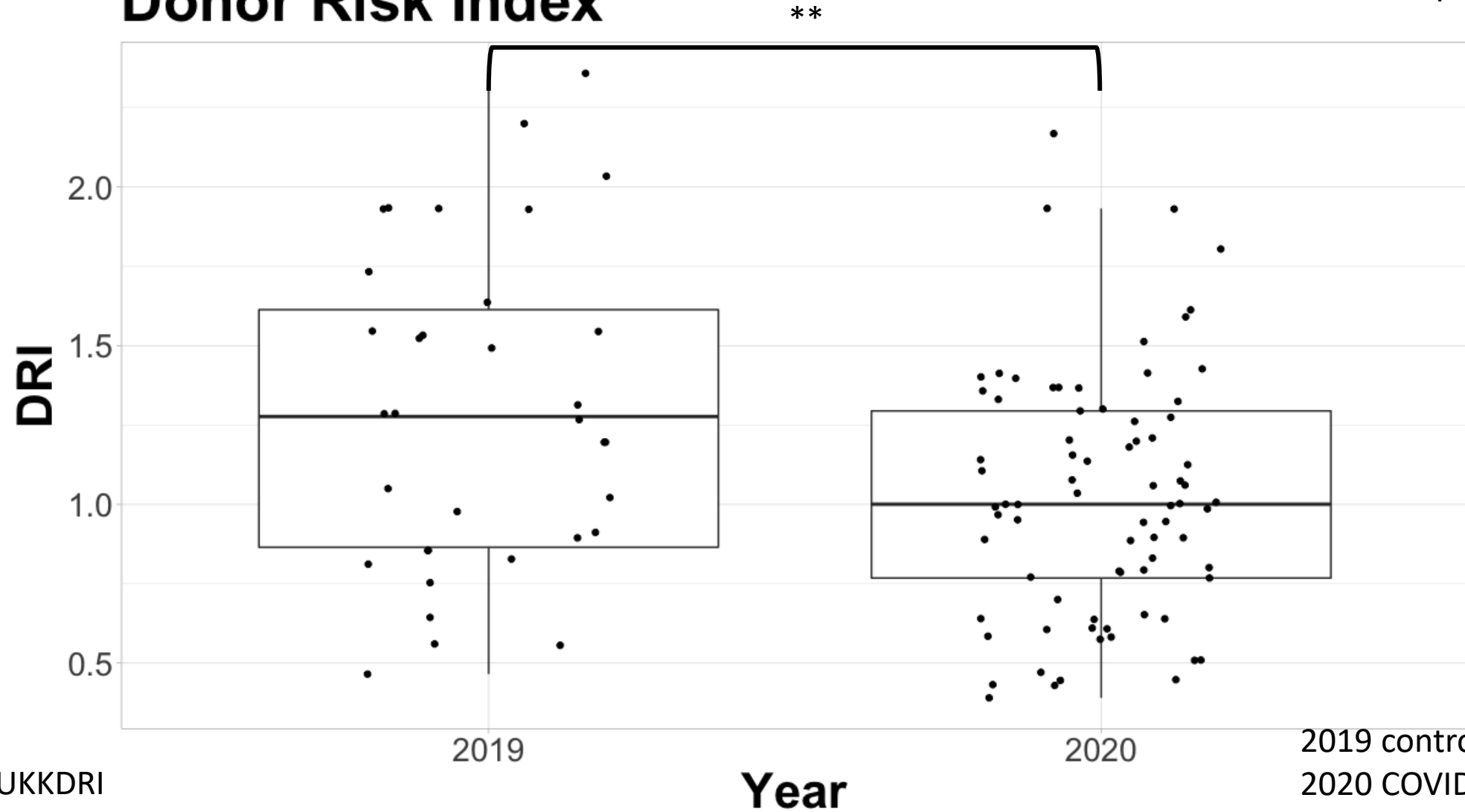
Study Cohort



n=77; Oxford recipients n=57; Coventry recipients n=20

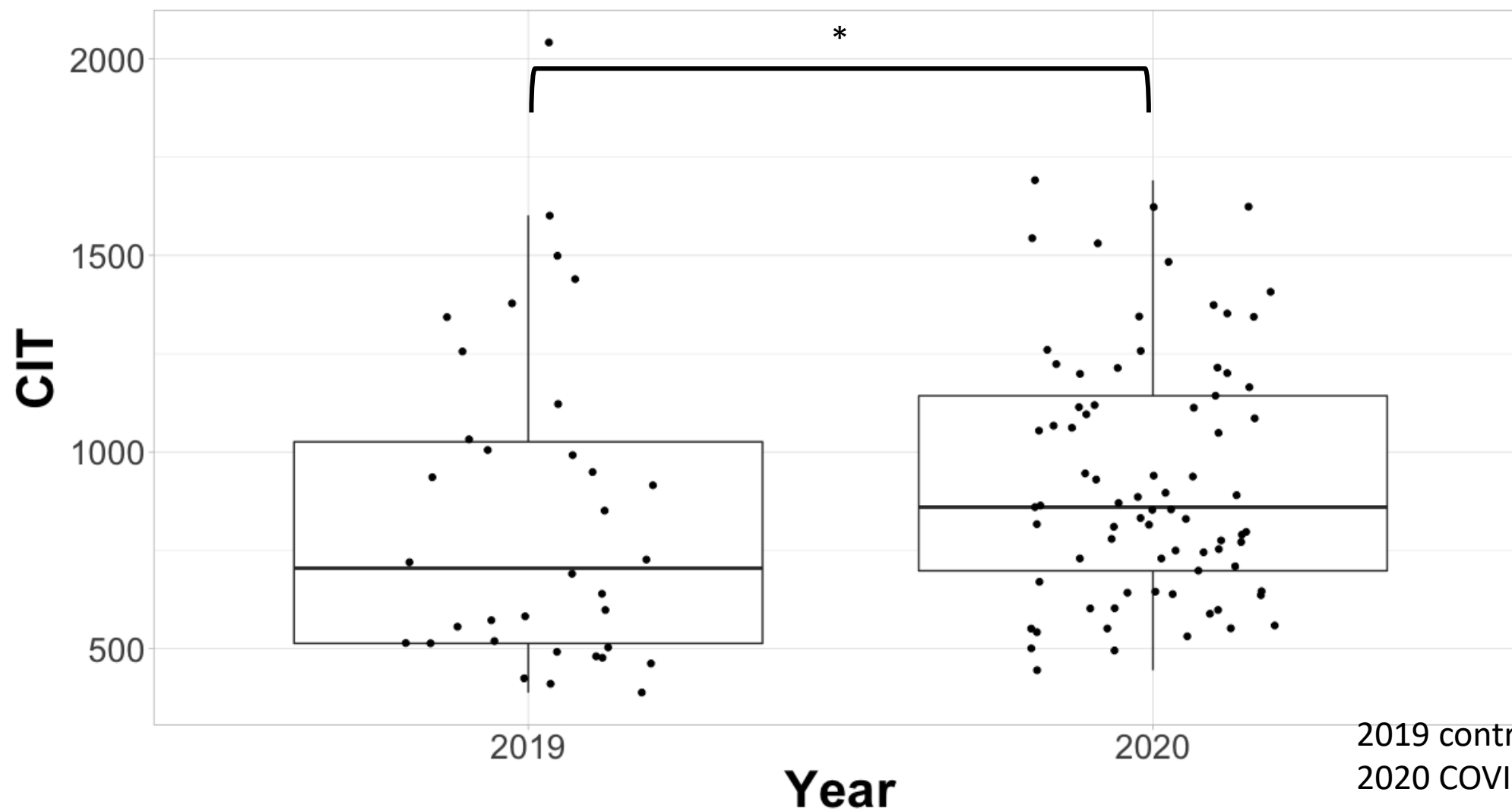
Donor Risk Index

P<0.01 (t-test)



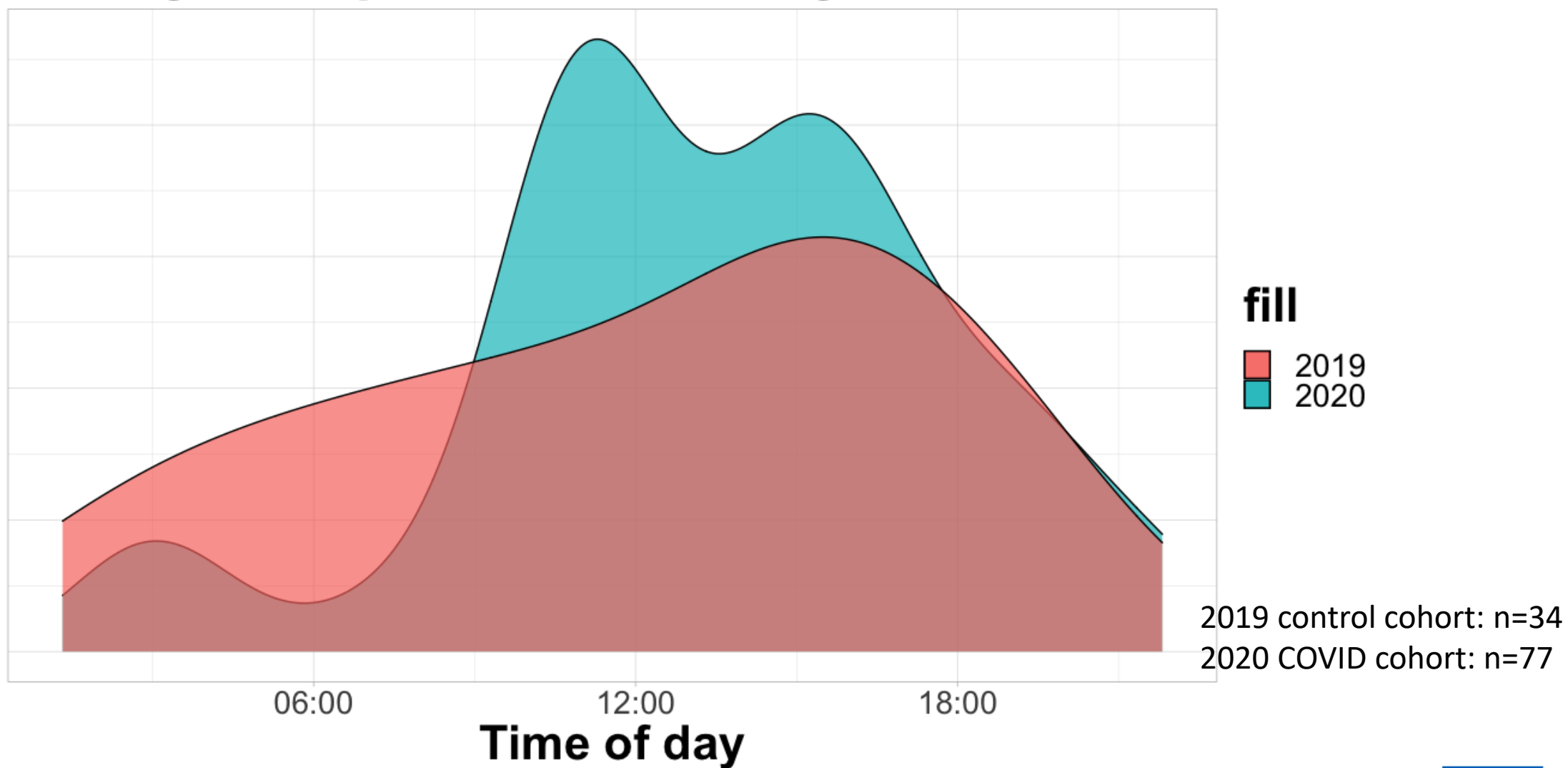
Cold Ischaemic Time

p=0.046 (Mann-Whitney U)

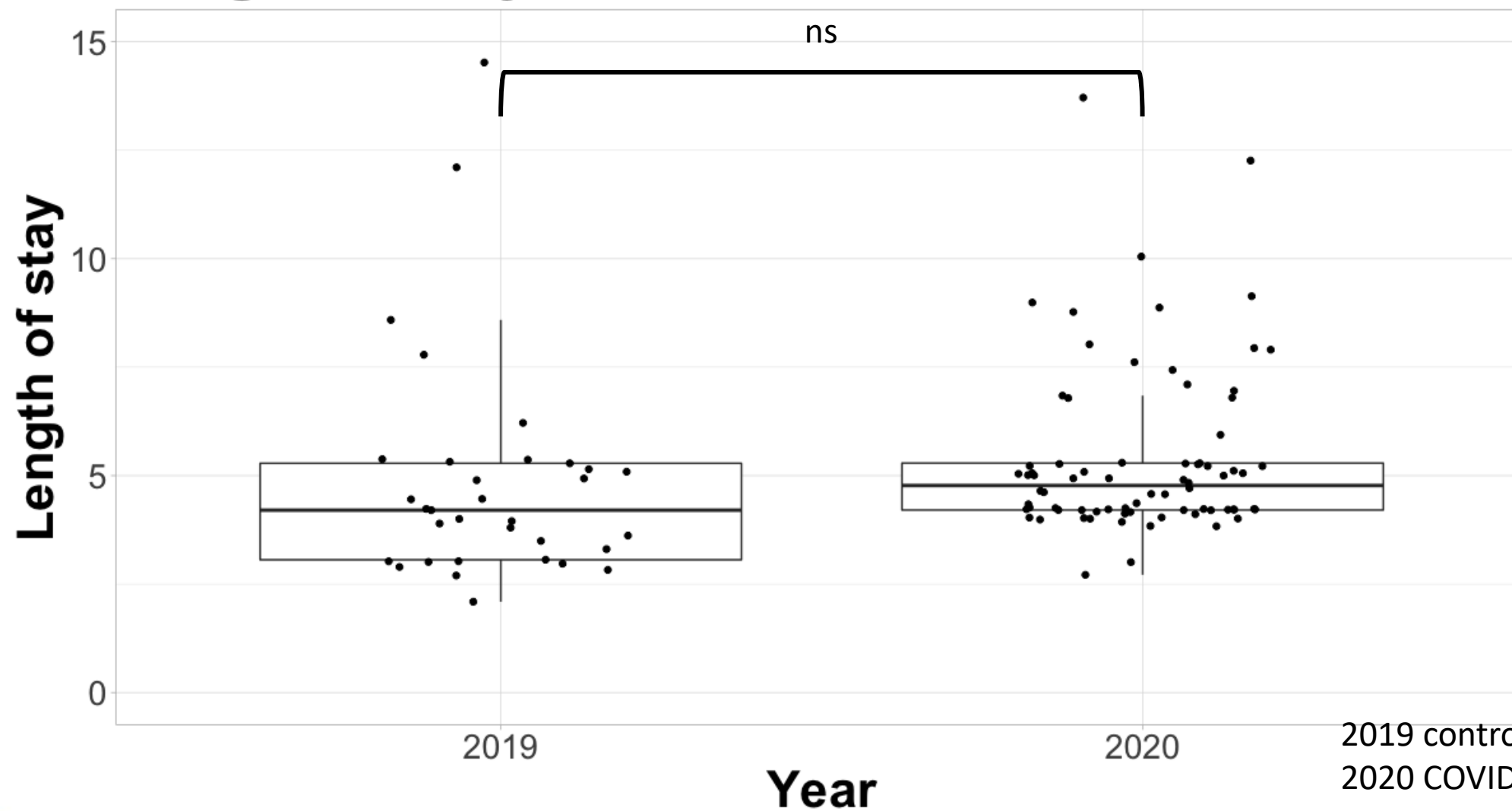


2019 control cohort: n=34
2020 COVID cohort: n=77

Kidney transplant - time of day



Length of stay



2019 control cohort: n=34
2020 COVID cohort: n=77

DGF

Any post-operative use of dialysis	Primary Function	DGF
2020 (COVID)	55/77 (71%)	22/77 (29%)
2019	20/34 (59%)	14/34 (41%)

ns (chi-square test for equality of proportions)

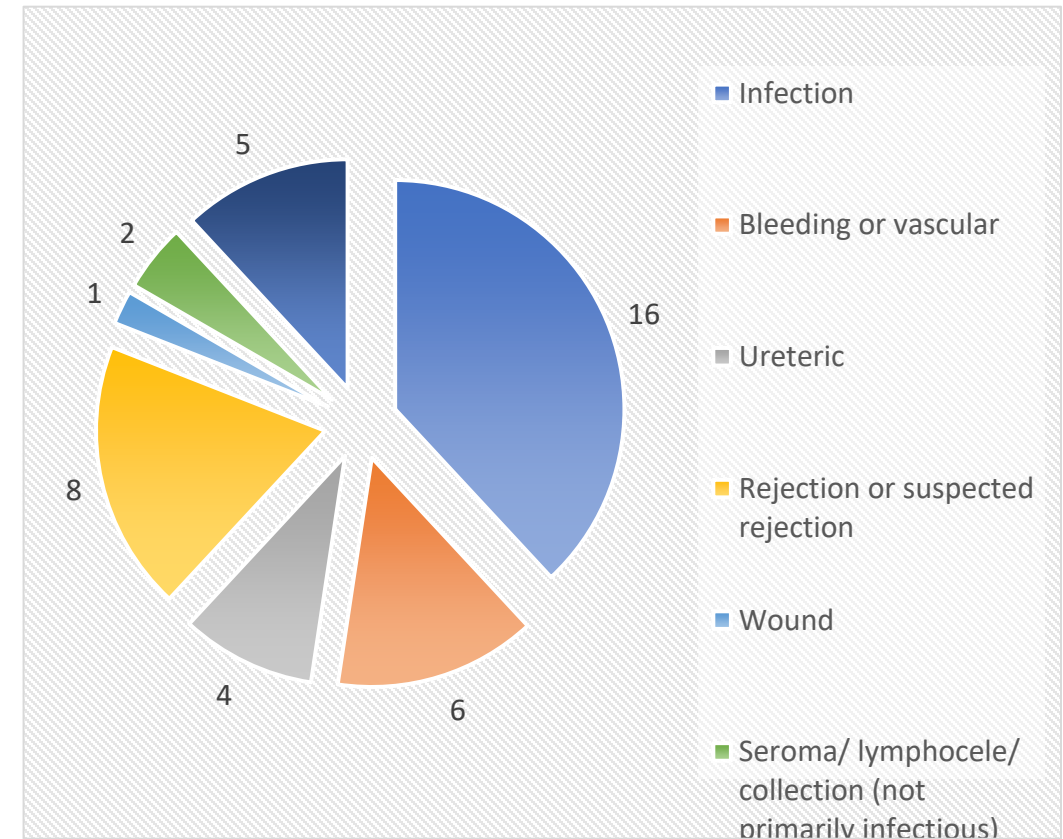
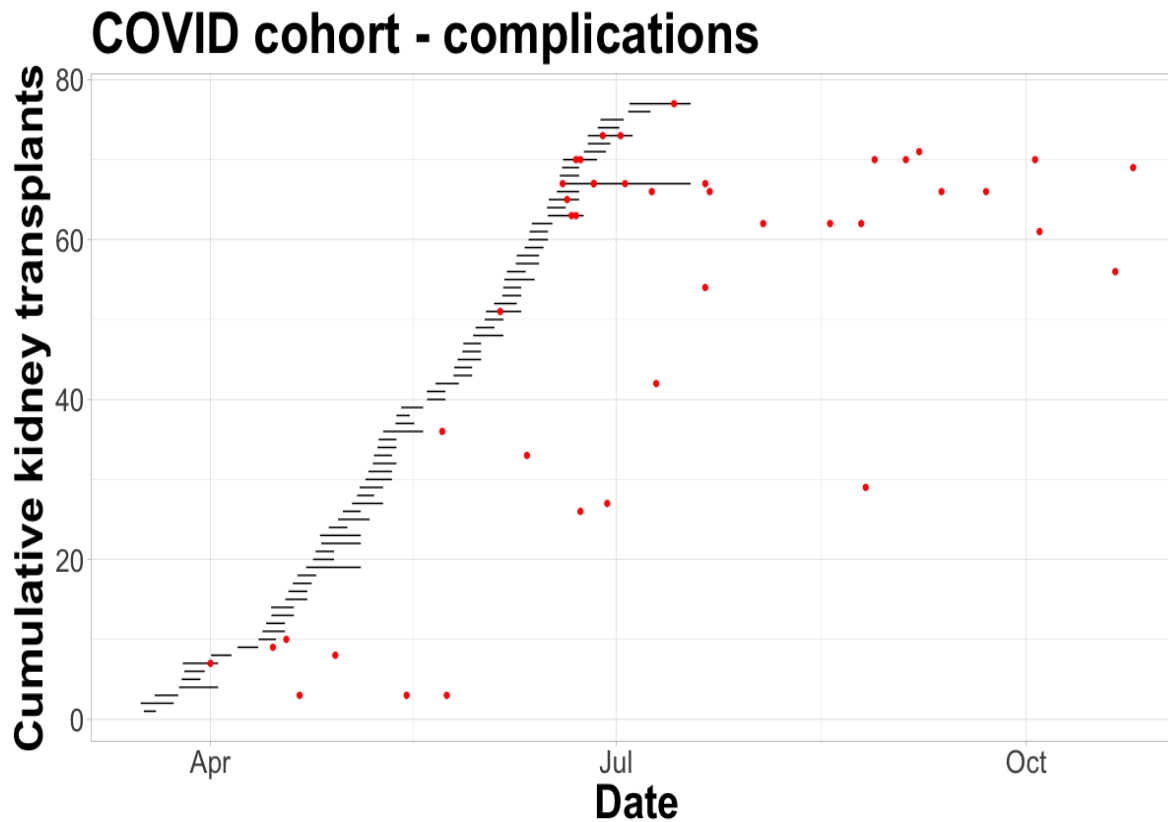
Any use of dialysis beyond discharge	No	Yes
2020 (COVID)	50/56 (89%)	6/56 (11%)
2019	20/28 (71%)	8/28 (29%)

ns (chi-square test for equality of proportions)

	Primary Function	DGF
2020 (COVID)	44/76 (58%)	32/76 (42%)
2019	8/30 (27%)	22/30 (73%)

**** p<0.01**

Complications - breakdown



Complications - rejection

- COVID cohort: 5 patients with early biopsy-proven acute rejection (first 3 months)
 - +1 not biopsied (warfarin); pulsed and responded
-> 6/77
- Comparator cohort: 1 patient with early biopsy-proven acute rejection (first 3 months)
-> 1/34

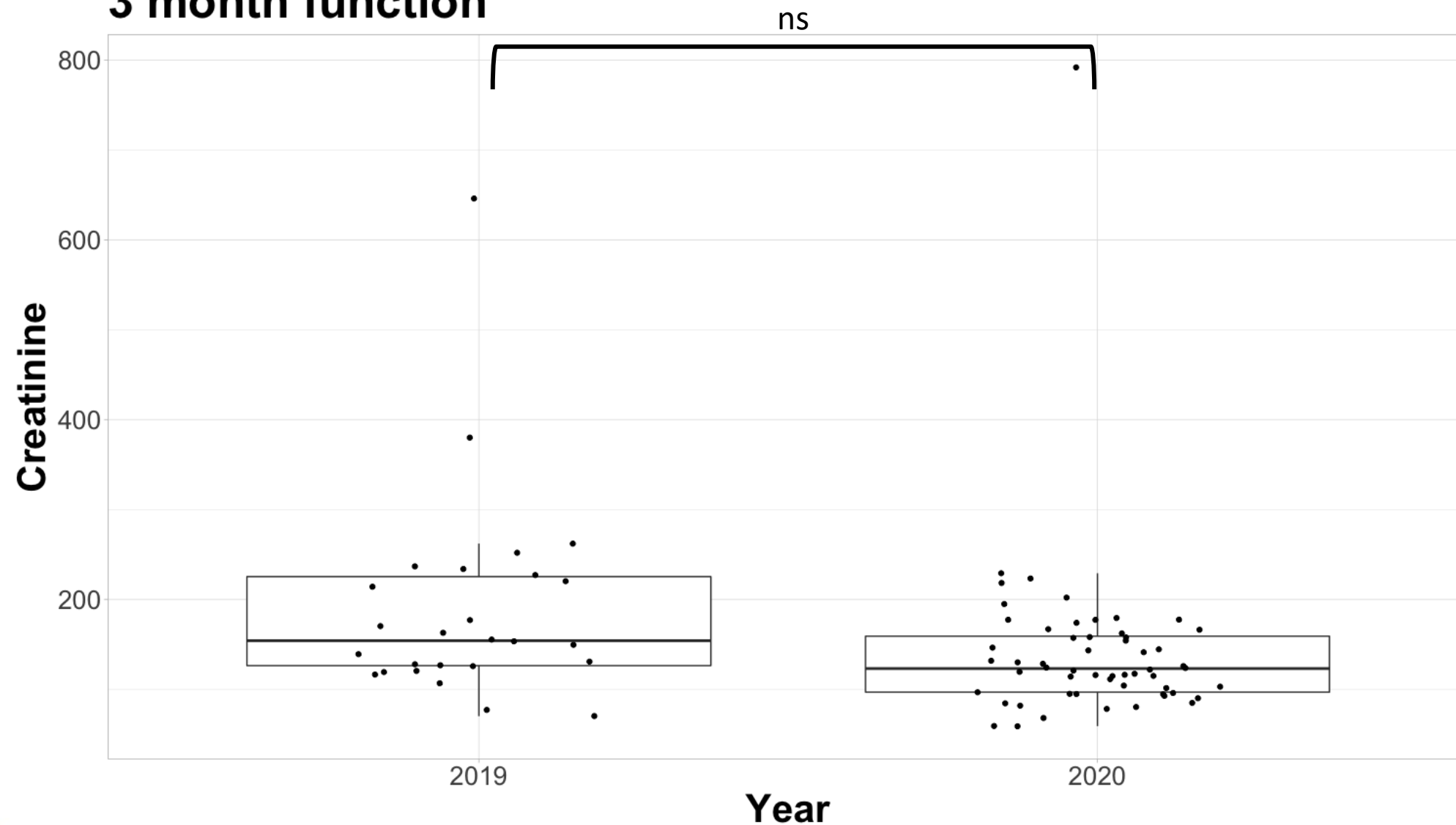
Early evidence that the change in immunosuppression protocol has had a significant effect

Complications – leading to readmission

- 12 patients (with 19 logged complications) were readmitted from the COVID-era cohort (n=57; 21%)
 - This included one patient diagnosed with COVID (severe infection; now recovered. No other positive test results)
- 6 patients (with 12 logged complications) were readmitted from the control group (n=29; 20%)
 - No positive COVID tests that we are aware of to date

Likelihood of readmission unchanged across cohorts

3 month function



Transplant Service Post Lockdown 23rd March'20

- 195 patients now dialysis independent
- June – LD program resumed
 - 27 in 2020 post lockdown
- 10th August 2020, paused Programs reopen
 - Pancreas program (n=20)

268 Transplants in 2020

The Second Wave

- Higher Burden of infection
 - Bigger burden on Hospital resources
- Greater Transmissibility
- More evidence of Nosocomial spread
- Unlike the first wave, not Covid-Clear

Second Wave

- Most of the ITU Reliant Programs paused on 23rd December
 - Continued with kidneys
 - 31st Dec – Most patients suspended
 - Matchability score of 8 or > only active on the list (n=38)
 - Decided to stick to Campath
 - 6 done in Jan
- 2 LDKTx in UHCW via the COxNet Collaboration Green pathway

Second Wave

- Staggered Resumption happening now
 - Entire Deceased donor Kidney waiting list active since 22nd Feb
 - LDKTx 15th March - 3 since
 - Pancreas Tx via Level 2 Care – 2 since
 - Better ITU Access from April hopefully
 - Intestinal Tx
 - High risk recipients needing ITU care

Conclusions

- Benefits of having a designated Clean site
 - Alternatively Green/Amber pathways needs setting up
 - Earmarked HDU/ITU space & access
- Nimbleness in the Service to adapt
 - Regular Consultant body Meeting
 - Pragmatic changes to practice as required
 - Immunosuppression, Donor selection, Recipient screening & selection
 - Recognising constraints, working flexibly with other specialties & the organization at large
 - Regular communications with Patients & the Referral centres
 - Email, letters, SoMe
 - Easier to reopen if not completely paused
- Collaborations/Networks

Thank you