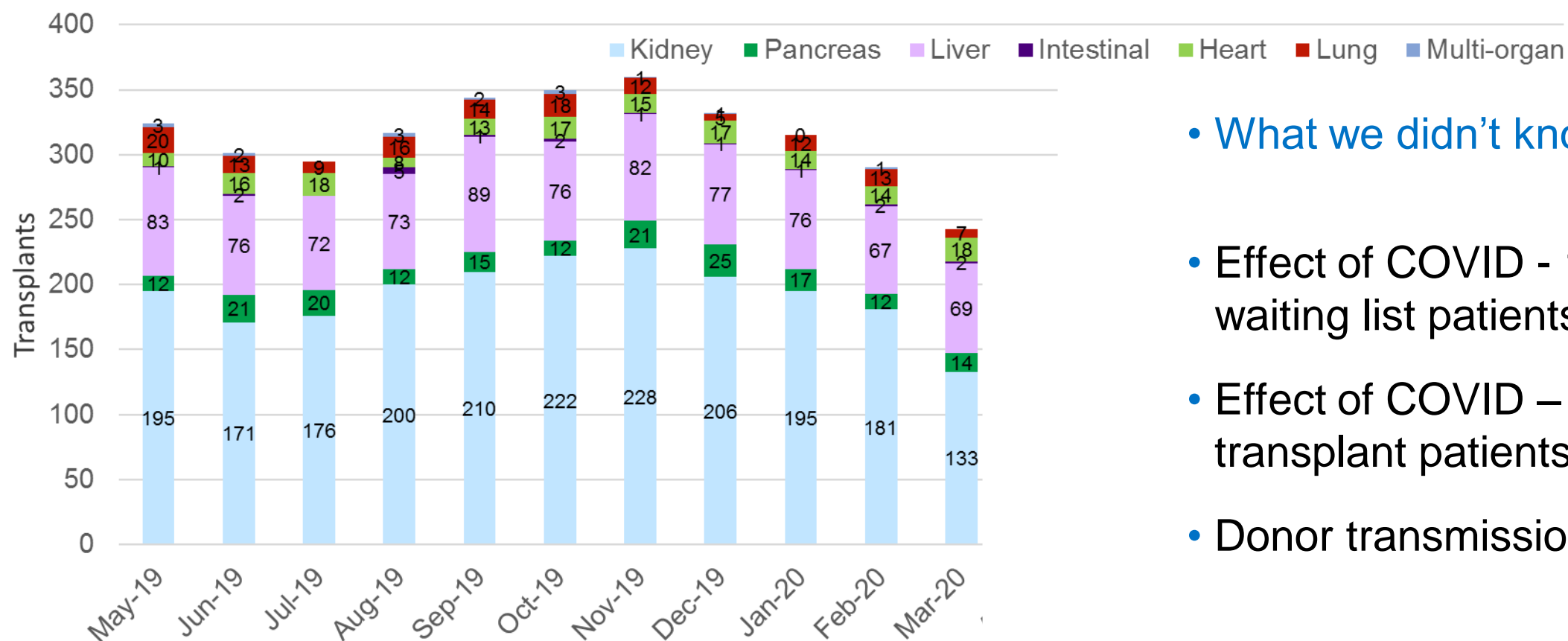


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COVID-19 – The UK Registry Data

Lisa Mumford (Rommel Ramanan)

Transplants



- What we didn't know
- Effect of COVID - 19 on waiting list patients
- Effect of COVID – 19 on transplant patients
- Donor transmission

Links with other UK Services

- April 2020 link set up with NHS Digital Tracing Service
 - Match all recipients to identify a death date (weekly)
- May 2020 link set up with Public Health England
 - Match English recipients to identify positive result for SARS-CoV-2 (weekly)
- July 2020 link set up with Public Health Scotland
 - Match Scottish recipients to identify positive result for SARS-CoV-2 (monthly)

Published analysis

SARS-CoV-2 infection and early mortality of waitlisted and solid organ transplant recipients in England: A national cohort study,

AM J Transplant 2020;20:3008-3018,
Ravanan and Callaghan et al.

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Cohort

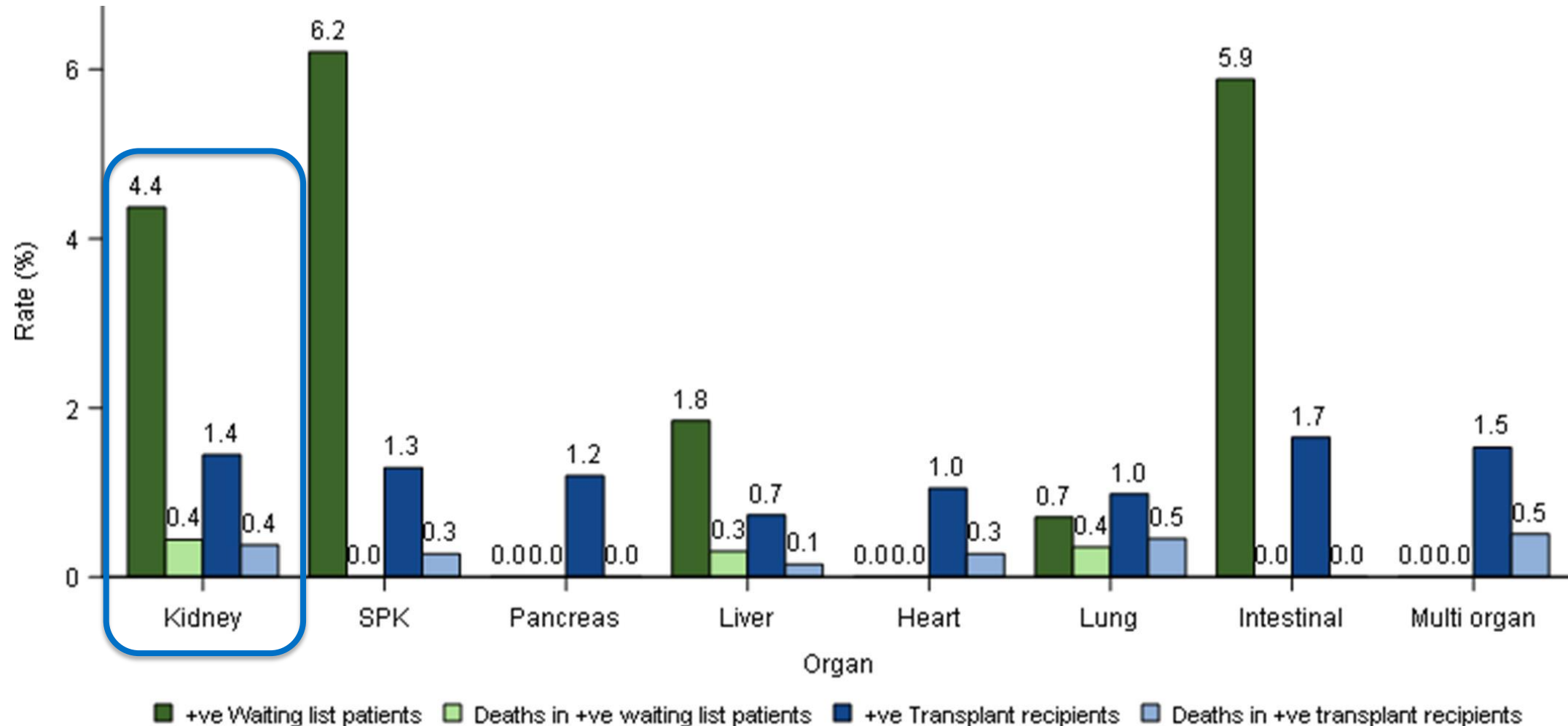
- All patients with a functioning transplant at 1 February 2020

N = 46,789

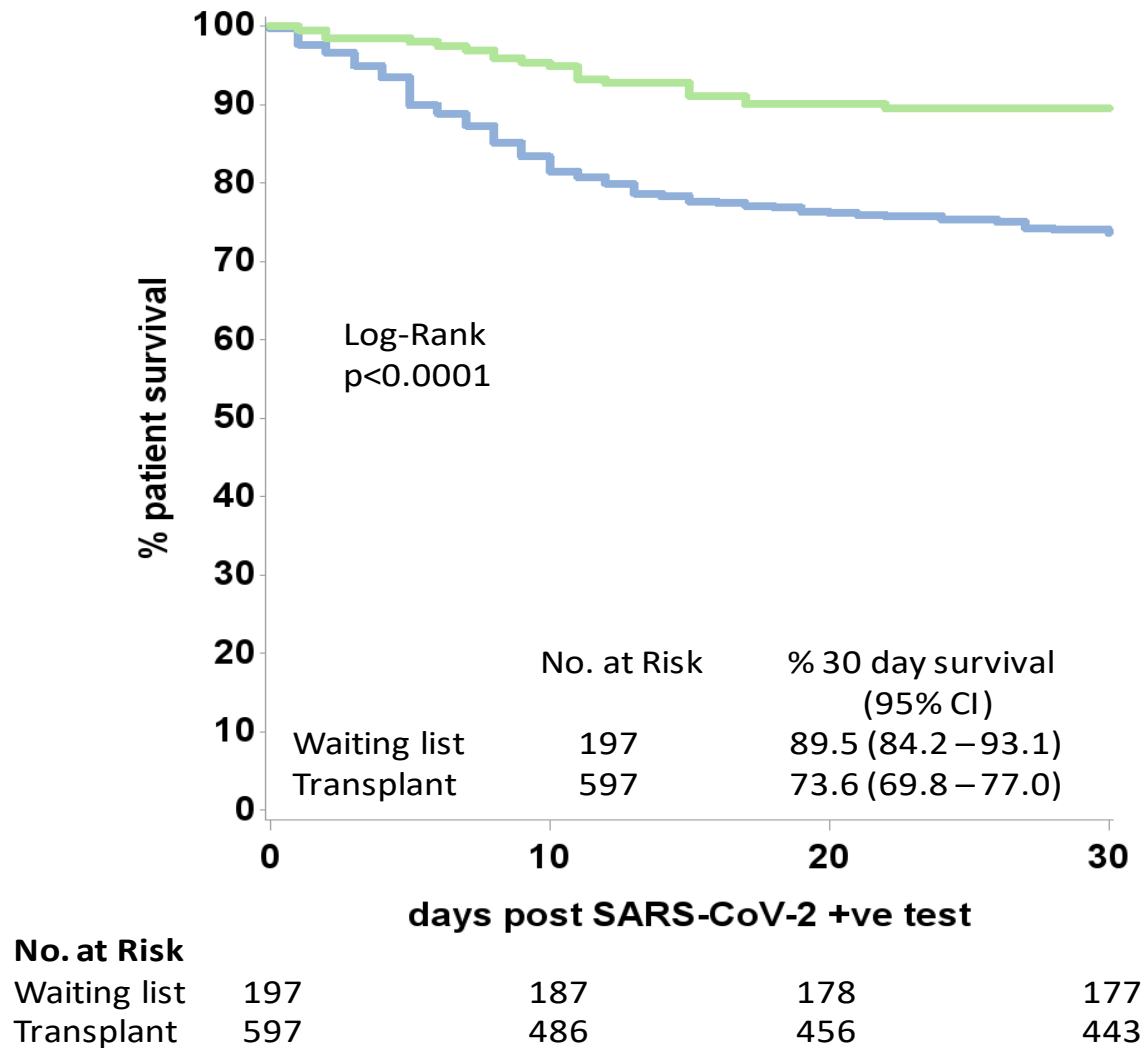
- All patients active on the UK waiting list at 1 February

N = 5,184

Unadjusted risk – SARS-CoV-2



30-day survival



Transplant population

Multivariable analysis

Risk of positive test SARS-CoV-2

Organ Type

Sex

Age Group

Ethnicity

Blood Group

Region

Year of transplant

Donor type

Risk of death after positive test SARS-CoV-2

Organ Type

Sex

Age Group

Ethnicity

Blood Group

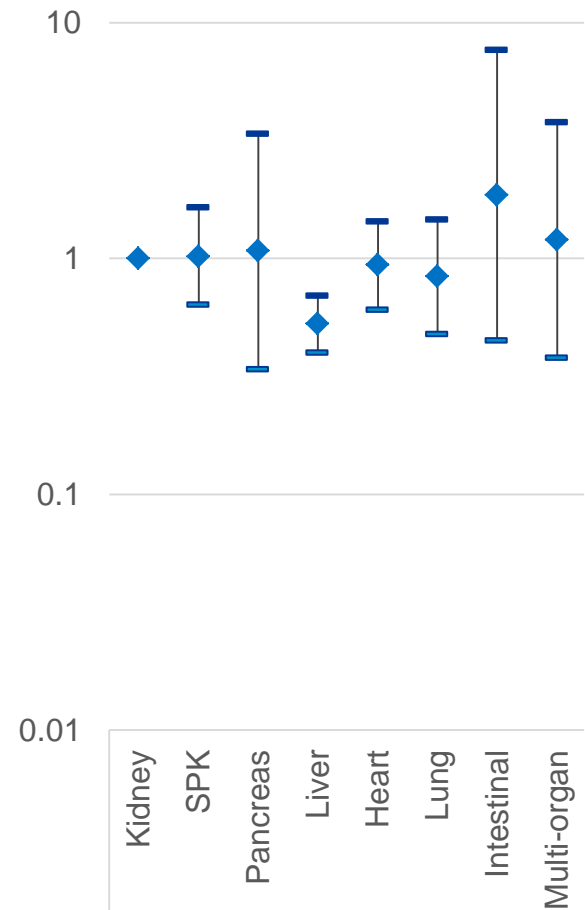
Region

Year of transplant

Donor type

Transplant population

Odds Ratio – Positive SARS-CoV-2



Organ type

Age group (years)

Ethnicity

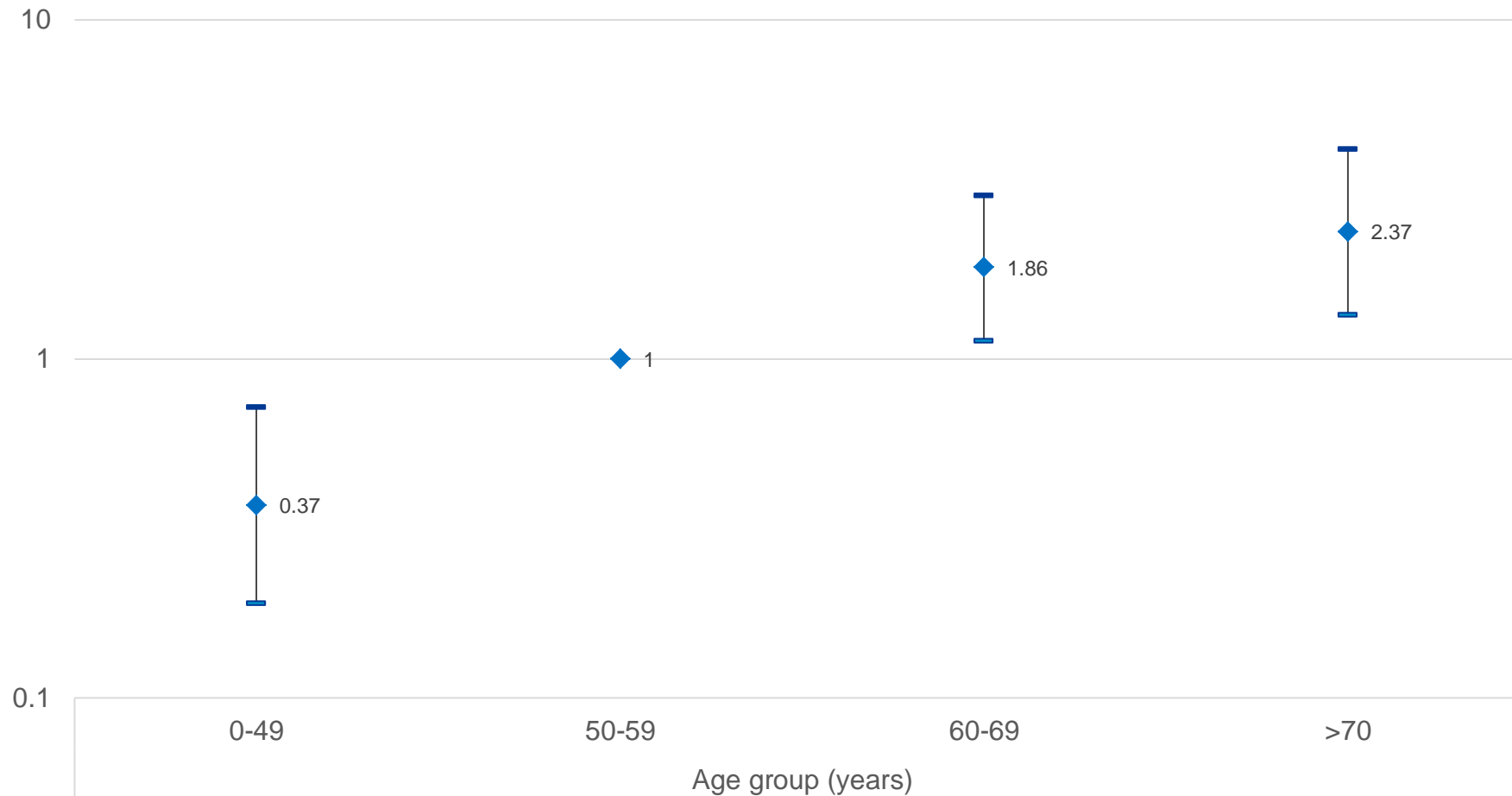
NHS Region

Year of transplant

Donor type

Transplant population

Odds Ratio – Death post +ve SARS-CoV-2

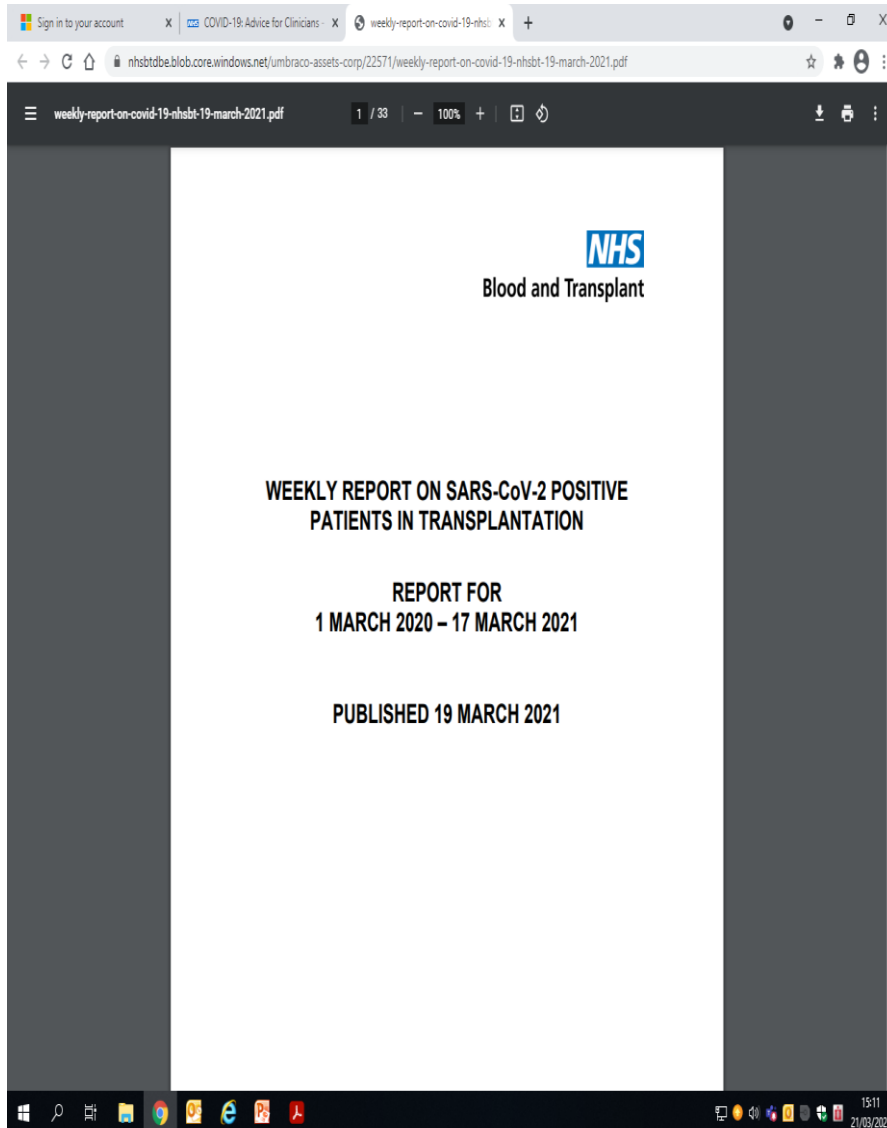


Weekly report

<https://www.odt.nhs.uk/covid-19-advice-for-clinicians/>

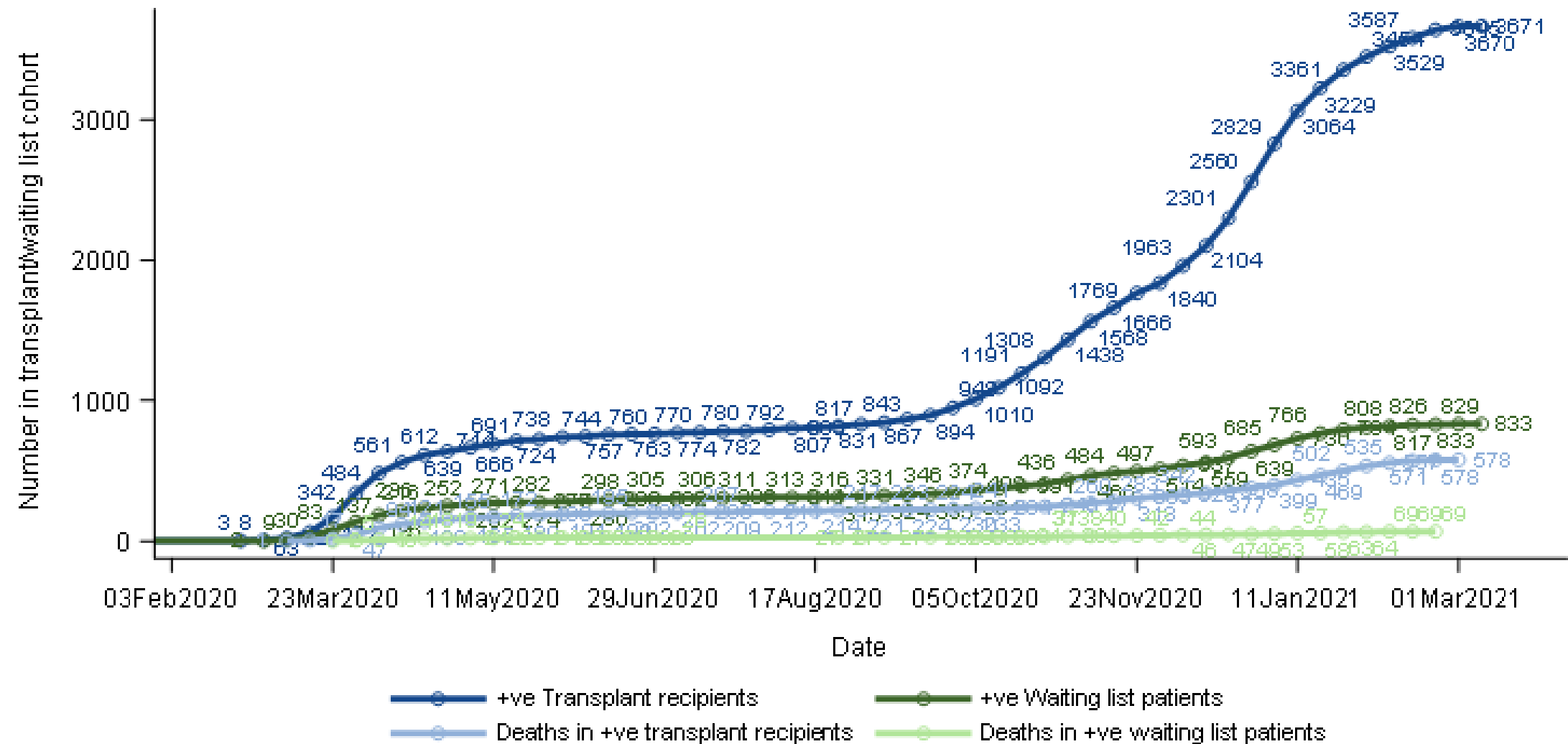
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Weekly report on SARS-CoV-2



- Cumulative incidence and death of SARS-CoV-2 positive transplant and waiting list patients
- Breakdown by demographic characteristics
- Sections by organ
- Results are similar to original published article

Figure 2 Cumulative incidence of SARS-CoV-2 positive patients



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A Systematic Review of COVID-19

A Systematic Review of COVID-19

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ncbi.nlm.nih.gov/pmc/articles/PMC7607258/pdf/main.pdf

175%

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A Systematic Review of COVID-19 and Kidney Transplantation

CLINICAL RESEARCH

V Mahalingasivam et al.: COVID-19 and Kidney Transplantation

Table 1. Description of each study design and quality assessment using the Newcastle-Ottawa Quality Assessment Scale, listed by order of online publication date

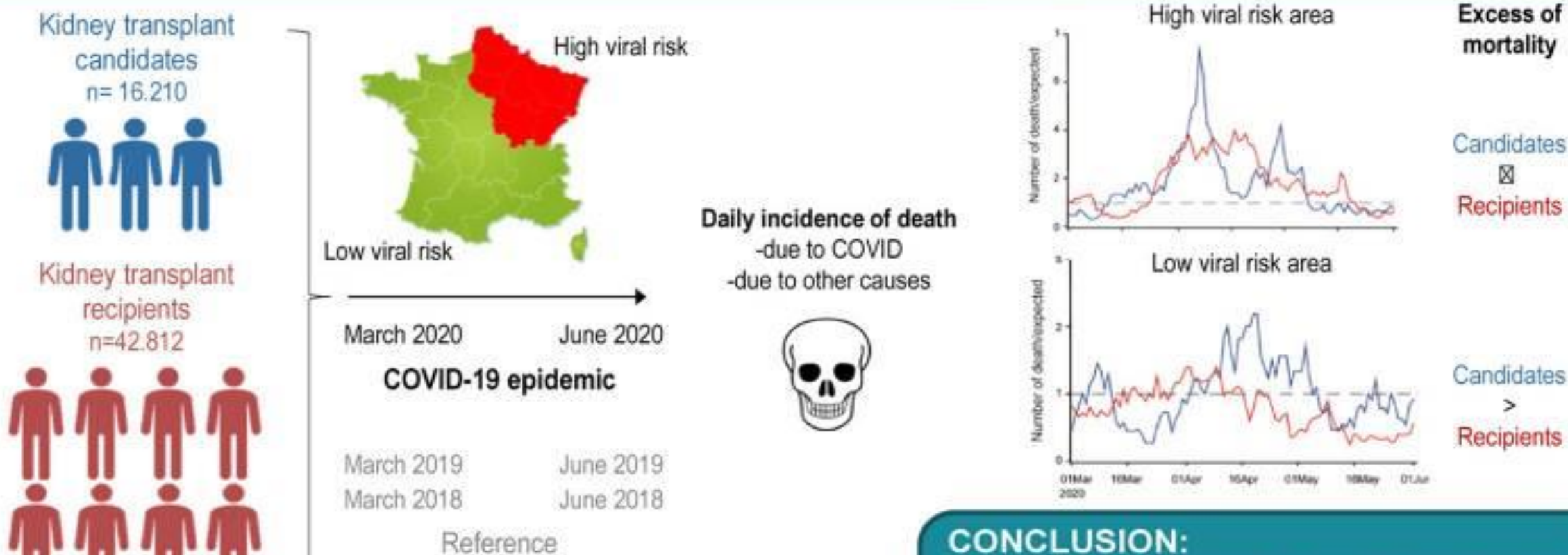
Study	Study design	Selection	Comparability	Outcome
Manganaro et al. ¹⁶	Single-center case series	☆☆★★	☆☆	☆☆☆
Boyarksy et al. ¹⁸	Cross-sectional national survey	☆☆☆☆	☆☆	☆☆☆
Pereira et al. ²¹	Two-center case series	★★★★	☆☆	☆☆☆
Sánchez-Álvarez et al. ¹²	National registry cohort	★★★★	★★	☆☆☆
Vistoli et al. ¹⁹	Cross-sectional national survey	★★★★	☆☆	☆☆☆
Rodriguez-Cubillo et al. ²³	Single-center case series	★★★★	☆☆	★★★★
Pascual. et al. ¹³	National registry case series	★★★★	☆☆	☆☆☆
Chen et al. ²⁷	Single-center case series	★★★★	☆☆	★★★★
Mehta et al. ²⁸	Single-center case series	★★★★	☆☆	★★★★
Bossini et al. ²⁵	Multicenter case series	★★★★	☆☆	★★★★
Cravedi et al. ¹⁷	Multicenter case series	★★★★	☆☆	★★☆☆
Chaudhry et al. ²⁶	Multicenter case series	★★★★	☆☆	★★☆☆
Pérez-Sáez et al. ¹⁴	National registry case series	★★★★	☆☆	★★★★
Demir et al. ²⁴	Multicenter case series	☆☆★★	☆☆	★★☆☆
Lubetzky et al. ²²	Single-center case series	★★★★	☆☆	★★★★
Bell et al. (preprint) ¹⁵	National registry case series	★★★★	☆☆	★★★★
Mohamed et al. ²⁰	Single-center case series	★★★★	★★	★★★★
Kates et al. ¹⁰	Multicenter case series	☆☆★★	☆☆	★★★★
Benotmane et al. ²⁹	Single-center case series	★★★★	☆☆	★★★★
Ravanan et al. ¹¹	National registry cohort	★★★★	★★	★★★★

From left to right, quality items were starred black if they fulfilled predefined criteria: selection was starred on representativeness of patients with the exposure of interest (kidney transplant), selection of the nonexposed group, ascertainment of exposure, and demonstration that outcome of interest (death) was not present at start of the study; comparability was starred on the study controlling for the exposure of interest, and any additional factor; outcome was starred on how the outcome was assessed, whether follow-up was long enough for the outcome to occur, and whether loss to follow-up was adequate enough to be unlikely to introduce bias.

A Systematic Review of COVID-19 and Kidney Transplantation - Kidney Int Rep. 2021 Jan; 6(1): 24–45.

15:34
21/03/2021

IMPact of the COVID-19 epidemic on the moRTAlity of kidney transplant recipients and candidates in a french Nationwide registry sTudy (IMPORTANT)



CONCLUSION:

COVID-19 induced an excess of mortality in kidney transplant recipients and candidates that predominates in the latter. Kidney transplantation should be maintained in low viral risk area to reduce the excess of deaths in candidates and avoid wasting resources.

Future work

- Repeat multivariable modelling (3500+ positive cases)
- Compare deaths post-transplant/waiting list for patients with positive SARS-CoV-2 test and those without (excess deaths)
- Patient infographic demonstrating risk
- Link with vaccination data

Summary

- Established a registry for waiting list patients and transplant recipients testing positive for SARS-CoV-2
- Utilised external links to enhance the data collection
- First published analysis – support decisions on risks and benefits of transplant
- Weekly report to inform transplants centres of recent data
- Close monitoring of COVID-19 pandemic in the UK