Supplemental Online Content

Chen JJ, Lee TH, Tian YC, Lee CC, Fan PC, Chang CH. Immunogenicity rates after SARS-CoV-2 vaccination in people with end-stage kidney disease: a systematic review and meta-analysis. *JAMA Netw Open*. 2021;4(10):e2131749. doi:10.1001/jamanetworkopen.2021.31749

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This supplemental material has been provided by the authors to give readers additional information about their work.

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eTable 1. Search Strategy and Result

Pubmed through July 30st, 2021	
#1	((((((((((Kidney Failure, Chronic[MeSH Terms]) OR (Renal Dialysis[MeSH Terms])) OR (Renal Insufficiency, Chronic[MeSH Terms])) OR (End stage renal disease)) OR (End stage kidney disease)) OR (Chronic renal failure)) OR (Chronic kidney disease)) OR (Chronic renal insufficiency)) OR (Chronic kidney failure)) OR (dialysis)) OR (hemodialysis)) OR (peritoneal dialysis)
#2	((COVID-19) OR (SARS-CoV-2)) AND (coronavirus)
#3	((((COVID-19 Vaccines[MeSH Terms]) OR (Immunogenicity, Vaccine[MeSH Terms])) OR (Spike Glycoprotein, Coronavirus[MeSH Terms])) OR (vaccine)) OR (vaccination)
#4	1# AND 2# AND #3 + Filters: from 2019 - 2021 , Result: 104
Medline through July 30st, 2021	
#1	Renal Dialysis/ or Dialysis/
#2	end stage renal disease.mp. or Kidney Failure, Chronic/
#3	AstraZeneca.mp.
#4	mRNA vaccine.mp.
#5	Tozinameran.mp.
#6	Comirnaty.mp.
#7	Moderna.mp.
#8	Janssen.mp.
#9	bnt162b2.mp.
#10	pfizer-biontech.mp.
#11	mrna-1273.mp.
#12	COVID-19 vaccine.mp. or COVID-19 Vaccines/
#13	#1 AND #2

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#14	#3 or #4 or #5 or #6 or #7 or #8 or #9 or #10 or #11 or #12
#15	#13 AND #14, Result: 46
EMbase through July 30st, 2021	
#1	'dialysis'/exp OR dialysis'
#2	'hemodialysis'/exp OR hemodialysis'
#3	'peritoneal dialysis'/exp OR 'peritoneal dialysis' OR (peritoneal AND ('dialysis'/exp OR dialysis))
#4	'chronic kidney failure'/exp OR 'chronic kidney failure' OR (chronic AND ('kidney'/exp OR kidney) AND ('failure'/exp OR failure))
#5	#1 OR #2 OR #3 OR #4
#6	'sars-cov-2 vaccine'/exp OR 'sars-cov-2 vaccine'
#7	'mrna-1273 vacccine' /exp OR 'mrna-1273 vacccine'
#8	'chadox1 ncov 19' /exp OR 'chadox1 ncov 19'
#9	'bnt162b2' /exp OR 'bnt162b2'
#10	'astrazeneca'/exp OR 'astrazeneca'
#11	('mrna'/exp OR mrna) AND ('vaccine'/exp OR vac cine)
#12	'tozinameran'/exp OR tozinameran
#13	'comirnaty'/exp OR comirnaty
#14	'moderna'/exp OR moderna
#15	'pfizer biontech'
#16	'ad26.cov2.s'/exp OR ad26.cov2.s
#17	#6 OR #7 OR #8 0R #9 OR #10 OR #11 OR #12 OR #13 OR #14 OR #15 OR #16
#18	#5 AND #17, Result 768 articles
#19	#18 AND (2020:py OR 2021:py) , Result 335 articles

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eTable 2. Newcastle-Ottawa Scale Assessment of the Included Studies

study	Representativeness of the exposed cohort (1)	Selection of the non exposed cohort (1)	Ascertainment of exposure (1)	Demonstration that outcome of interest was not present at start of study (1)	Comparability of cohorts on the basis of the design or analysis (2)	Assessment of outcome (1)	Was follow-up long enough for outcomes to occur (1)	Adequacy of follow up of cohorts (1)	NOS_score
Agur,2021	1	0	1	1	0	1	1	1	6
Anand,2021	1	0	1	0	0	1	1	1	5
Attias, 2021	1	0	1	0	0	1	1	1	5
Bertrand,2021	1	0	1	1	0	1	1	1	6
Billany,2021	1	0	1	0	0	1	1	1	5
Broseta,2021	1	0	1	1	0	1	1	1	6
Chan, 2021	1	0	1	0	0	1	1	1	5
Clarke, 2021	1	5	1	0	0	1	1	1	5
Danthu,2021	1	1	1	1	1	1	1	1	8
Duarte, 2021	1	0	1	1	0	1	1	1	6
Ducloux,2021	1	0	1	0	0	1	1	1	5
Frantzen,2021	1	0	1	0	0	1	1	1	5
Frantzen,2021 (3rd boost dose cohort)	1	0	1	1	0	1	1	1	6
Goupil,2021	1	0	1	1	0	1	1	1	6
Grupper,2021	1	1	1	0	1	1	1	1	7
Lacson,2021	1	0	1	0	0	1	1	1	5
Jahn, 2021	1	1	1	1	1	1	1	1	8

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Lensy,2021	1	1	1	1	1	1	1	1	8
Longlune,2021	1	0	1	1	0	1	1	1	6
Rincon-Arevalo,2021	1	1	1	0	1	1	1	1	7
Rodríguez-Espinosa,2021	1	0	1	1	0	1	1	1	6
Sattler, 2021	1	1	1	1	1	1	1	1	8
Schrezenmeier, 2021	1	1	1	1	1	1	1	1	8
Simon, 2021	1	1	1	1	1	1	1	1	8
Speer,2021	1	1	1	1	1	1	1	1	8
Strengert,2021	1	1	1	1	1	1	1	1	8
Torreggiani,2021	1	0	1	0	0	1	1	1	5
Weigert, 2021	1	1	1	1	1	1	1	1	8
Yanay, 2021	1	1	1	1	1	1	1	1	8
Yau,2021	1	1	1	0	1	1	1	1	7
Yi, 2021	1	0	1	1	0	1	1	1	6
Zitt, 2021	1	0	1	1	0	1	1	1	6

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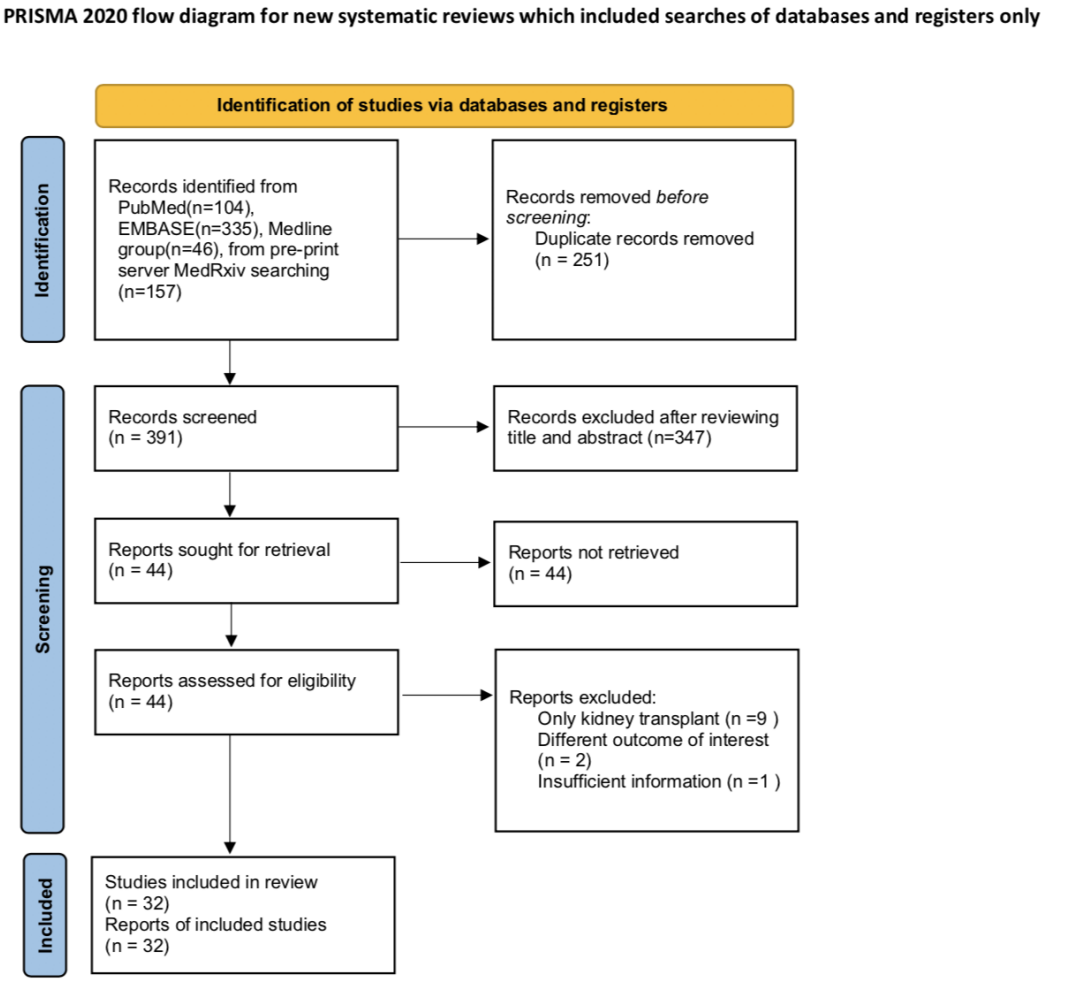
eFigure 1. Study Inclusion Flowchart



From: Page MJ, McKenzie JE, Bossuyt PM, Boutron I, Hoffmann TC, Mulrow CD, et al. The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. BMJ 2021;372:n71. doi: 10.1136/bmj.n71

For more information, visit: http://www.prisma-statement.org/

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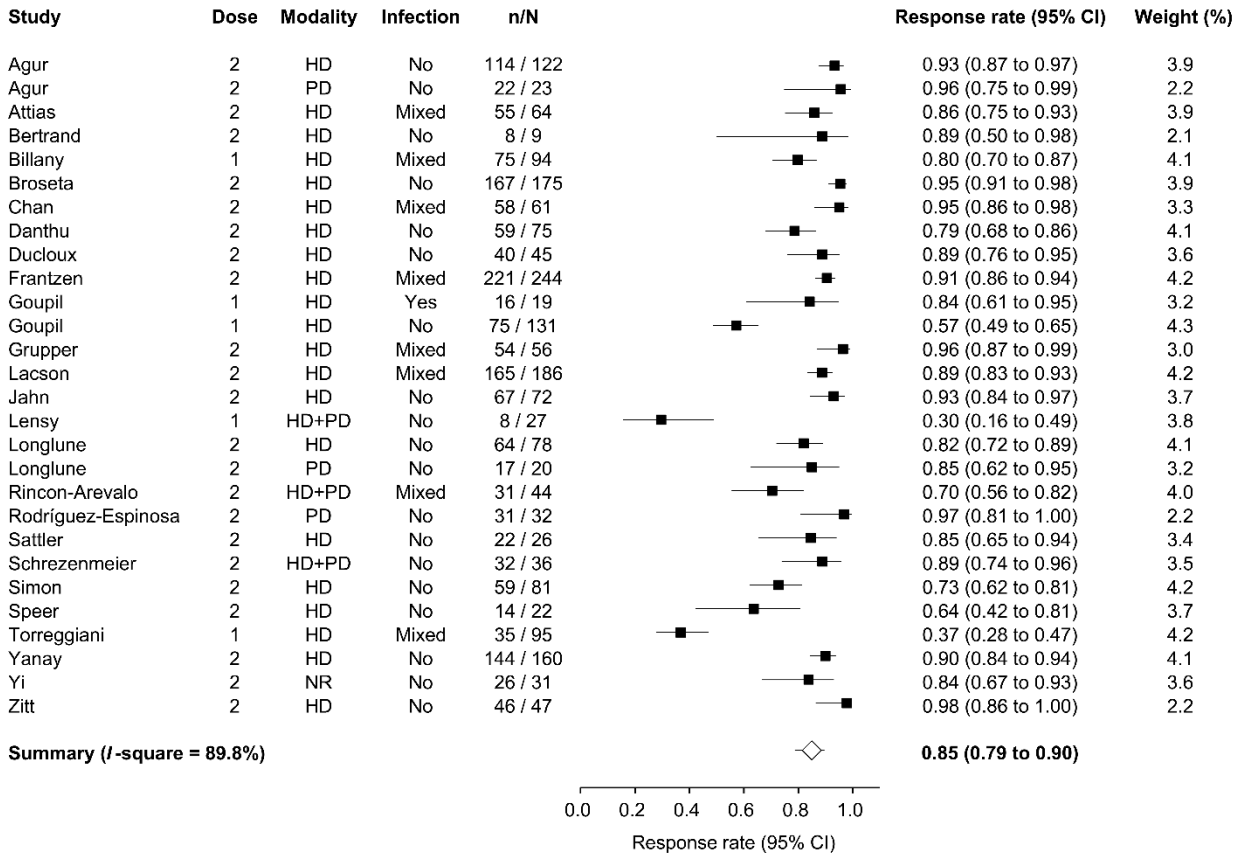
eFigure 2. Sensitivity Analysis of Pooled Immunogenicity Rate in Patients Receiving Dialysis After Excluding the Preprint Articles



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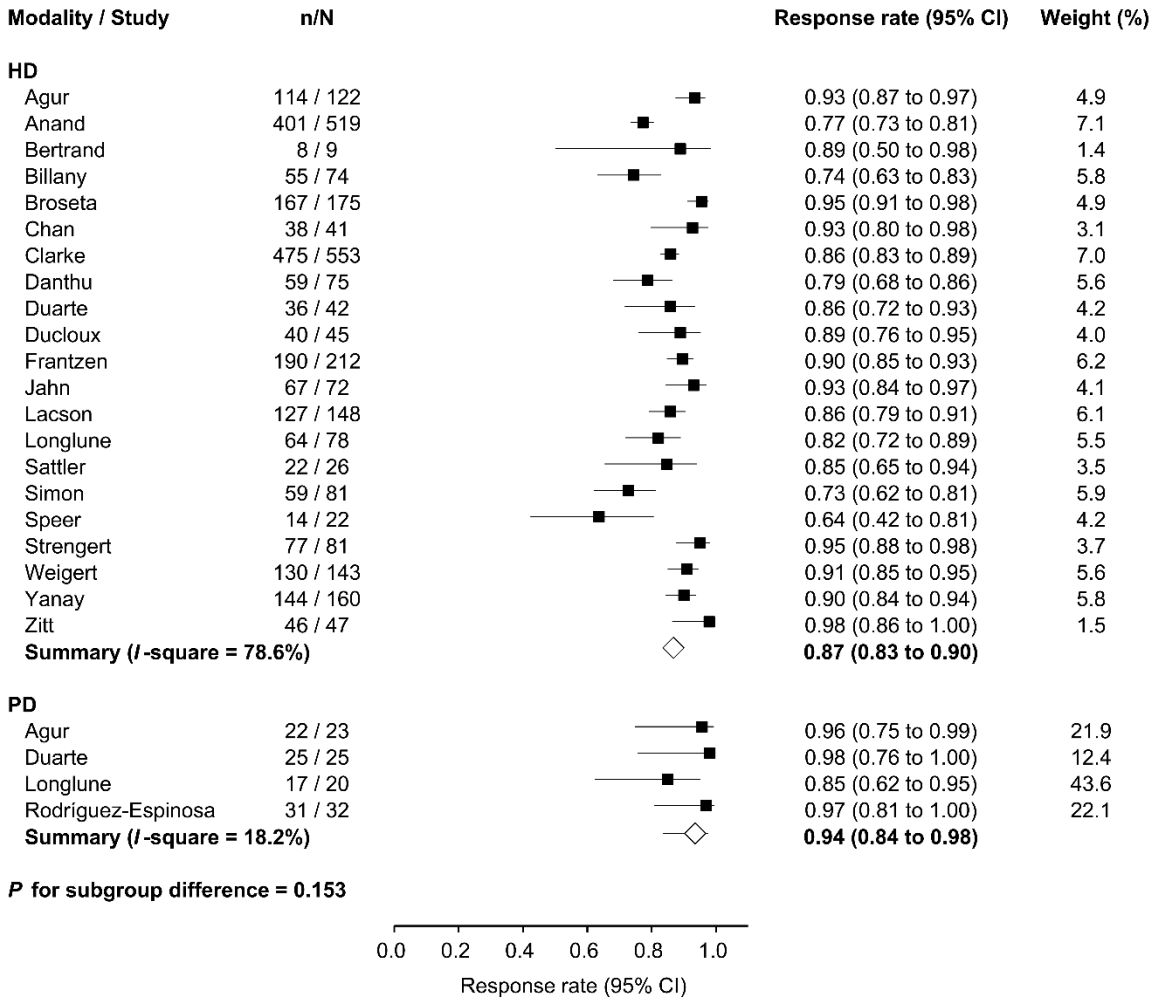
eFigure 3. Subgroup Analysis Comparing the Pooled Immunogenicity Rates in Patients Receiving Hemodialysis or Peritoneal Dialysis in SARS-CoV-2–Naive Dialysis Population With Complete Vaccine Protocol



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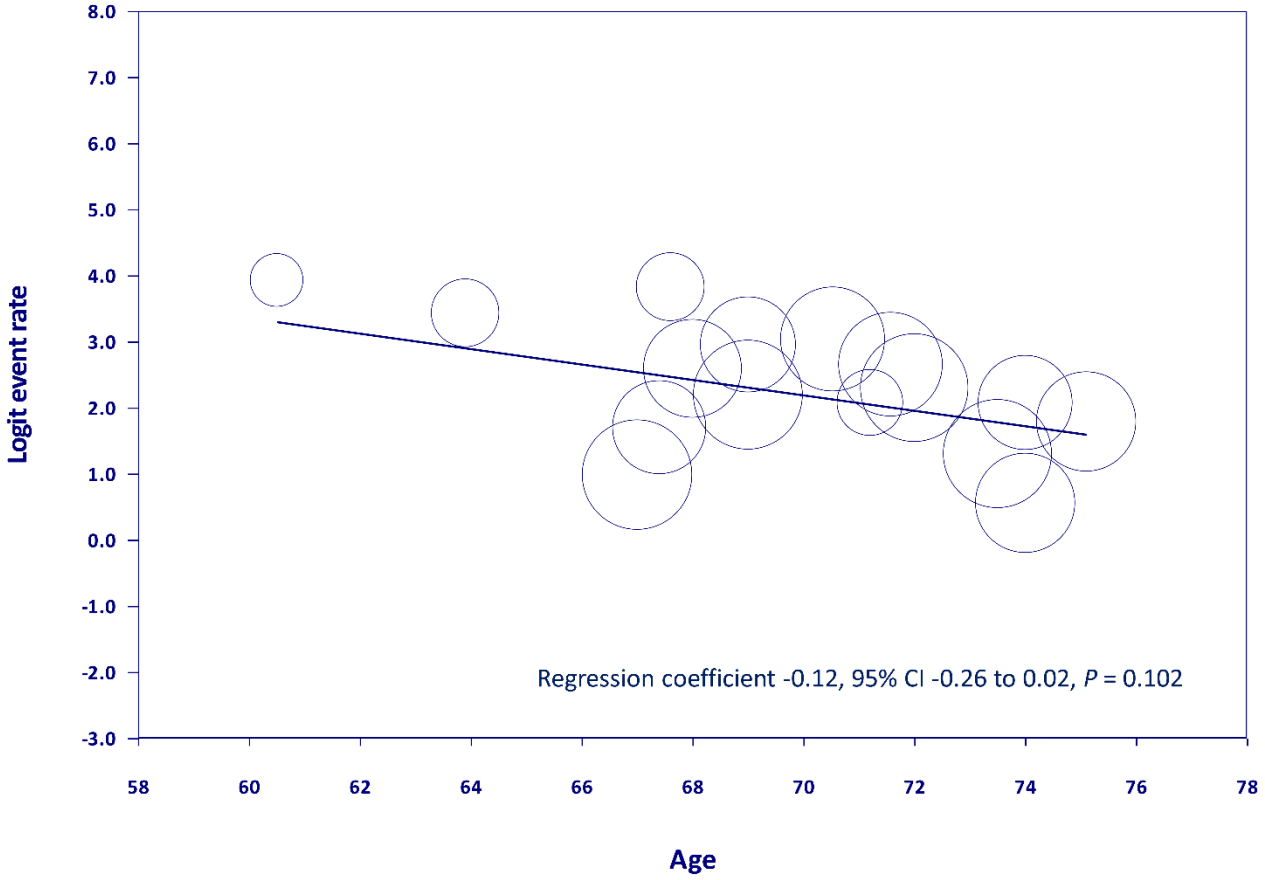
eFigure 4. Associations Between Age and Immunogenicity Rates in SARS-CoV-2–Naive Dialysis Population with Complete Vaccine Protocol



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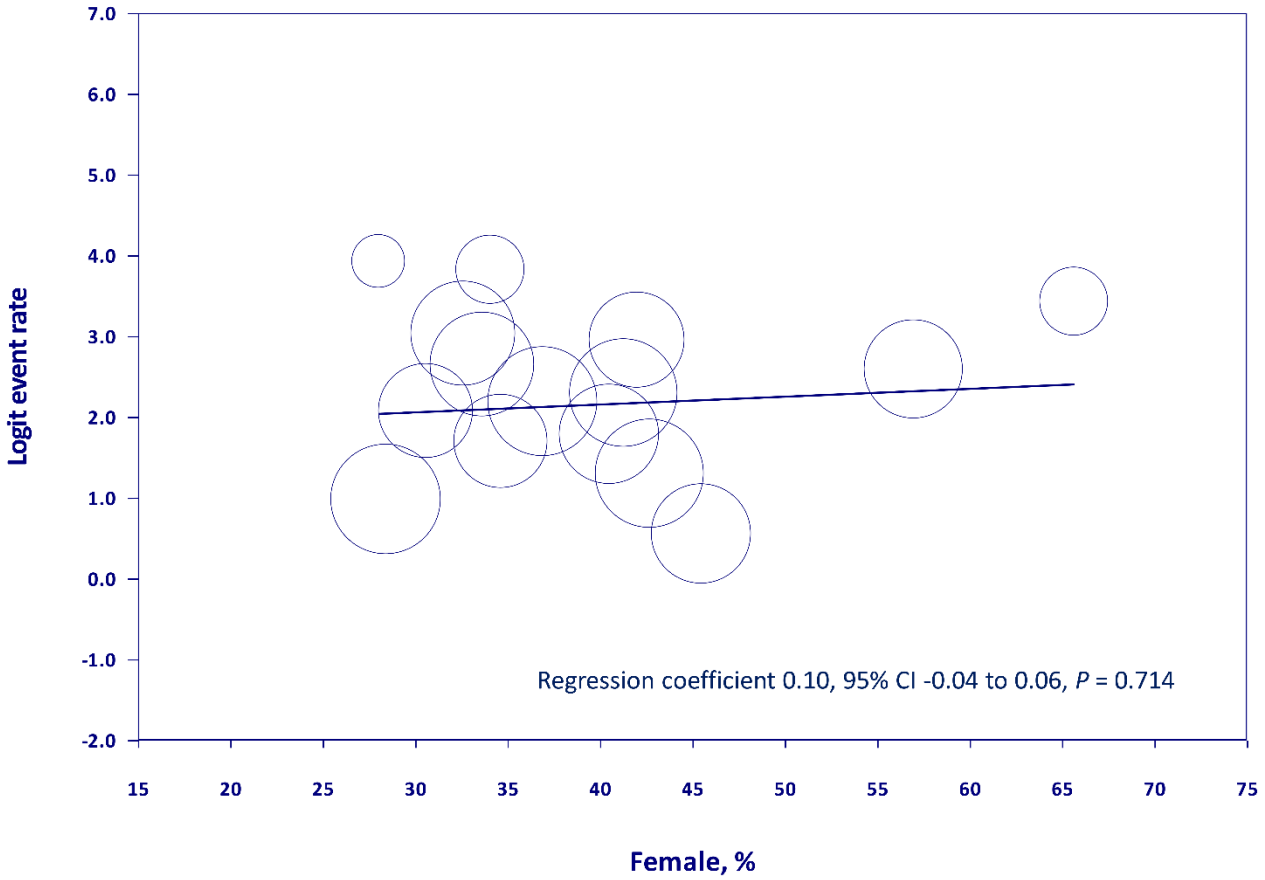
eFigure 5. Associations Between Proportion of Women and Immunogenicity Rates in SARS-CoV-2–Naive Dialysis Population With Complete Vaccine Protocol



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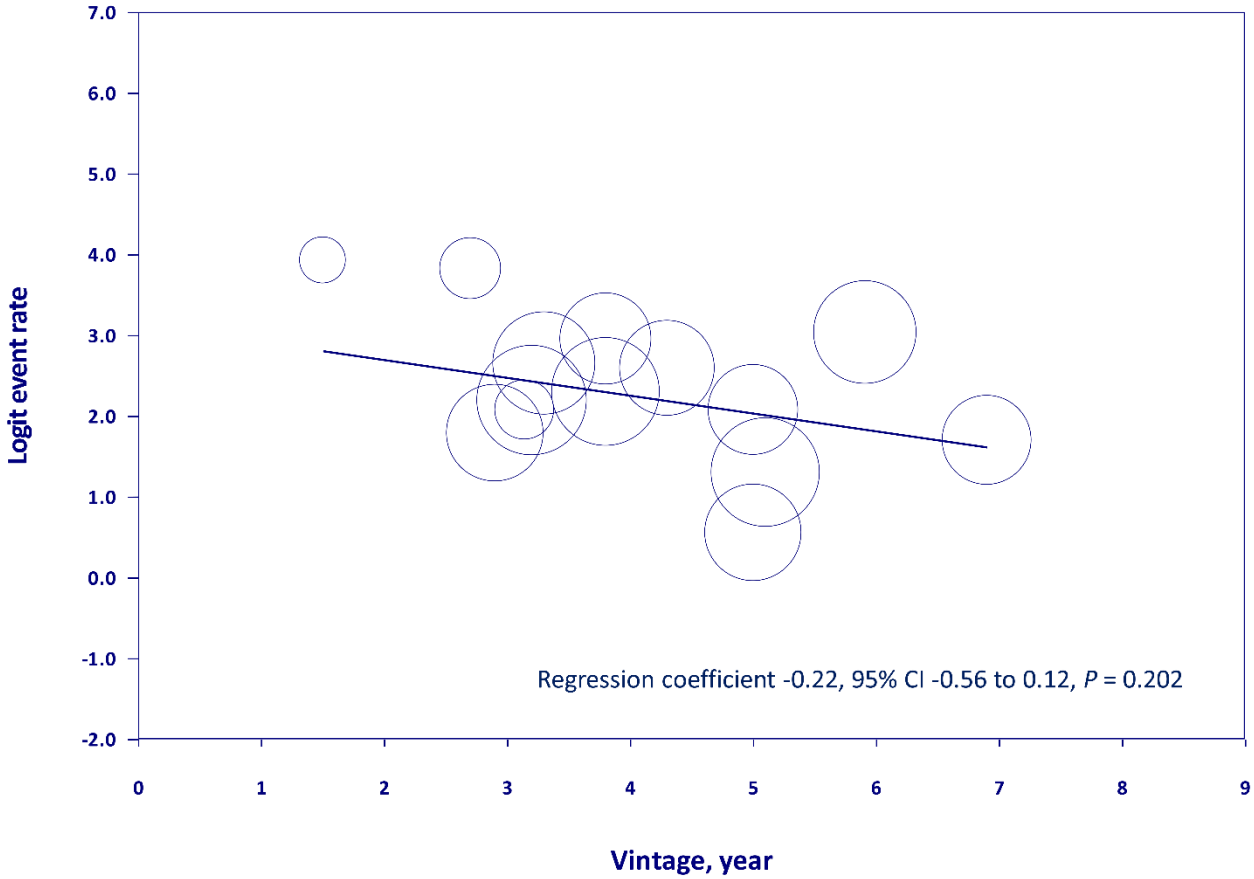
eFigure 6. Associations Between Dialysis Vintage and Immunogenicity Rates in SARS-CoV-2–Naive Dialysis Population With Complete Vaccine Protocol



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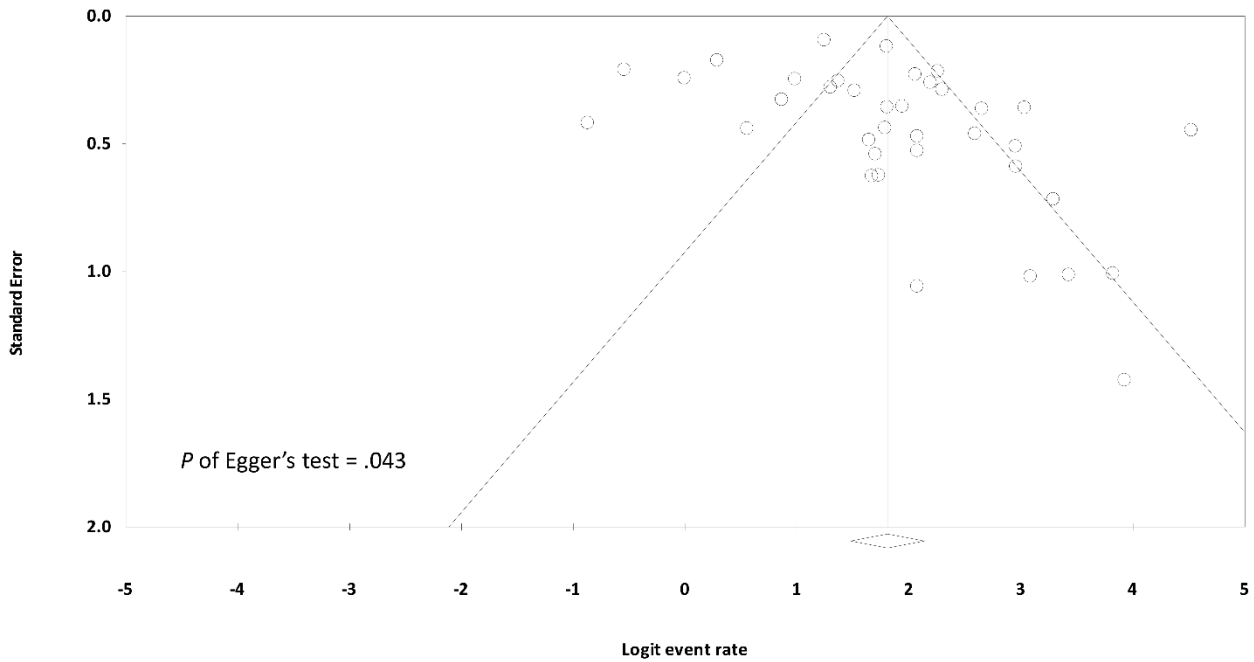
eFigure 7. Funnel Plot Illustrating Publication Bias



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