Supplemental material is neither peer-reviewed nor thoroughly edited by CJASN. The authors alone are responsible for the accuracy and presentation of the material.

Supplementary Tables:

Table S1: Electronic search strategy:

Database: Ovid MEDLINE(R) In-Process & Other Non-Indexed Citations and Ovid MEDLINE(R) <1946 to Present>

Sea	arch Strategy:
1	exp Transplants/ (10277)
2	exp Transplantation/ (436996)
3	exp allografts/ (3156)
4	(recipient* or receiver* or transplant* or allograft* or graft*).tw. (651476)
5	(re-transplant* or retransplant* or post-transplant* or posttransplant* or postgraft*).tw. (35218)
6	or/1-5 (785953)
7	exp Kidney/ (316829)
8	(kidney* or renal or nephr*).tw. (763437)
9	7 or 8 (845640)
10	6 and 9 (117119)
11	exp Kidney Transplantation/ (82549)
12	10 or 11 (127050)
13	exp Cyclosporins/ (36819)
14	exp Tacrolimus/ (13348)

15	exp Sirolimus/ (14594)
16	(cyclosporin* or tacrolimus or sirolimus or sandimun or neoral or everolimus or certican or rapamune or rapamycine or
afini	itor or zortress or afinitor or gengraf).tw. (59407)
17	(biosporin* or sigmasporin* or osporin* or imusporin*).tw. (29)
18	(cyclohexan* or consupren*).tw. (8130)
19	(prograf or advagraf or astagraf or envarsus or adoport or graceptor or modigraf).tw. (227)
20	(calcineurin* adj3 (inhibit* or block* or suppress*)).tw. (6639)
21	(immunosuppress* or immuno-suppress* or mTOR).tw. (128607)
22	or/13-21 (188646)
23	exp BK Virus/ (1715)
24	exp Polyomavirus Infections/ (6277)
25	((BK or polyoma*) adj3 (vir?emia* or virus* or nephropath* or infection*)).tw. (4941)
26	exp Cytomegalovirus Infections/ (22444)
27	((Cytomegalovirus or CMV or cytomegalovirus* or (salivary adj2 gland* adj virus*) or hhv 5) adj5 infection*).tw. (15956)

or/23-27 (37462)

12 and 22 and 28 (1961)

28

Database: Embase <1980 to 2016 Week 03>

Sea	arch Strategy:
1	exp Transplantation/ (814830)
2	exp allografts/ (26879)
3	(recipient* or receiver* or transplant* or allograft* or graft*).tw. (837870)
4	(re-transplant* or retransplant* or post-transplant* or posttransplant* or postgraft*).tw. (58873)
5	or/1-4 (1097200)
6	exp Kidney/ (353081)
7	(kidney* or renal or nephr*).tw. (934464)
8	6 or 7 (1020686)
9	5 and 8 (166121)
10	exp Kidney Transplantation/ (119642)
11	9 or 10 (179883)
12	exp Cyclosporins/ (1942)
13	exp Tacrolimus/ (58816)
14	exp Sirolimus/ (40508)
15	(cyclosporin* or tacrolimus or sirolimus or sandimun or neoral or everolimus or certican or rapamune or rapamycine or
afin	itor or zortress or afinitor or gengraf).tw. (90583)
16	(biosporin* or sigmasporin* or osporin* or imusporin*).tw. (39)
17	(cyclohexan* or consupren*).tw. (10420)

18	(prograf or advagraf or astagraf or envarsus or adoport or graceptor or modigraf).tw. (2901)
10	(program of advagram of astagram of envarsus of adoport of graceptor of modigram).tw. (2901)
19	(calcineurin* adj3 (inhibit* or block* or suppress*)).tw. (10548)
20	(immunosuppress* or immuno-suppress* or mTOR).tw. (179912)
21	or/12-20 (287962)
22	exp BK Virus/ (2782)
23	exp Polyomavirus Infections/ (5510)
24	((BK or polyoma*) adj3 (vir?emia* or virus* or nephropath* or infection*)).tw. (5958)
25	exp Cytomegalovirus Infections/ (27388)
26	((Cytomegalovirus or CMV or cytomegalovirus* or (salivary adj2 gland* adj virus*) or hhv 5) adj5 infection*).tw. (20613)
27	or/22-26 (46125)
28	11 and 21 and 27 (5140)

Search Name: mTOR_CENTRAL_Jan18

Last Saved: 18/01/2016 15:03:20.183

Description:		
ID	Search	
#1	MeSH descriptor: [Transplants] explode all trees	
#2	MeSH descriptor: [Transplantation] explode all trees	
#3	MeSH descriptor: [Allografts] explode all trees	
#4	recipient or receiver or transplant or allograft or graft	
#5	retransplant* or re-transplant* or post-transplant* or posttransplant* or graft* or postgraft*	
#6	#1 or #2 or #3 or #4 or #5	
#7	MeSH descriptor: [Kidney] explode all trees	
#8	kidney* or renal or nephr*	
#9	#7 or #8	
#10	#6 and #9	

#11	MeSH descriptor: [Kidney	
	Transplantation] explode all trees	
#12	#10 or #11	
#13	MeSH descriptor: [Cyclosporins]	
	explode all trees	
#14	MeSH descriptor: [Tacrolimus]	
	explode all trees	
#15	MeSH descriptor: [Sirolimus]	
	explode all trees	
#16	cyclosporin or tacrolimus or	
	sirolimus or sandimun or neoral or	
	everolimus or certican or rapamune	
	or rapamycine or afinitor or	
	zortress or afinitor or gengraf	
#17	biosporin or sigmasporin or osporin	
	or imusporin	
#18	cyclohexan or consupren	
#19	prograf or advagraf or astagraf or	
	envarsus or adoport or graceptor or	
	modigraf	
#20	calcineurin near/3 inhibitor	
#21	immunosuppress or immuno-	
	suppress	

#22	MeSH descriptor: [TOR Serine- Threonine Kinases] explode all trees	
#23	mTOR	
#24	#13 or #14 or #15 or #16 or #17 or #18 or #19 or #20 or #21 or #22 or #23	
#25	MeSH descriptor: [BK Virus] explode all trees	
#26	MeSH descriptor: [Polyomavirus Infections] explode all trees	
#27	BK virus	
#28	BK near/3 nephropathy	
#29	BK near/3 infection	
#30	MeSH descriptor: [Cytomegalovirus Infections] explode all trees	
#31	CMV near/5 infection	
#32	cytomegalovirus near/5 infection	
#33	#27 or #28 or #29 or #30 or #31 or #32	
#34	#6 and #24 and #33	

Table S2: Risk of bias in included studies (Comparison 1)

Study Name	Random sequence generation	Allocation concealment	Blinding of participants and personnel	Blinding of outcomes assessment	Completeness of data	Selective outcome reporting	Other bias
Rostaing, 2015 [18]	Unclear risk of bias	Unclear risk of bias	Unclear risk of bias	Low risk of bias	Unclear risk of bias	Low risk of bias	low risk of bias
	Method of randomization not specified	Method of allocation concealment not specified	"open label trial"	"Review authors judge that the outcome is not likely to be influenced by lack of blinding"	"Study was completed by 81.4% of patients, with adverse events being the most frequent reason for withdrawal"	All outcomes listed in the methods section are reported in the results section	The study appears to be free of other sources of bias
Budde, 2015 [19]	Low risk of bias	Low risk of bias	Unclear risk of bias	Low risk of bias	Low risk of bias	Low risk of bias	High risk of bias
	"Patients were randomized using a validated, automated, central system in a 1 :1 ratio, with investigators notified of the treatment group by fax"	"Patients were randomized using a validated, automated, central system in a 1 : 1 ratio, with investigators notified of the treatment group by fax"	" open label trial"	"Review authors judge that the outcome is not likely to be influenced by lack of blinding"	" 6 patients in intervention group and 9 patients in control group discontinued the trial" " reasons for discontinuation unlikely related to true outcome, administration	"All outcomes listed in the methods section are reported in the results section	"Baseline differences between the two treatment arms. Everolimus group was a mean of 1 year longer post-transplant and a median of almost 2 years longer, a difference

					reasons, withdrawal of consent"		that may have favored the CNI arm"
Budde, 2014 APPOLO(5- years follow-up)	Low risk of bias "Patients were	Low risk of bias	Unclear risk of bias	Low risk of bias	Low risk of bias	Low risk of bias	High risk of bias
[20]	randomized using a validated, automated, central system in a 1 : 1 ratio, with investigators notified of the treatment group by fax"	"Patients were randomized using a validated, automated, central system in a 1 : 1 ratio, with investigators notified of the treatment group by fax"	" open label trial"	"Review authors judge that the outcome is not likely to be influenced by lack of blinding	" 12 patients in intervention group and 14 patients in control group discontinued the trial" "reasons for discontinuation unlikely related to true outcome; administration reasons, withdrawal of consent, death"	"All outcomes listed in the methods section are reported in the results section	"trial was terminated early due to slow recruitment of patients" "Baseline differences between the two treatment arms. Everolimus group was a mean of 1 year longer post- transplant and a median of almost 2 years longer, a difference that may have favored the CNI arm"
Budde, 2014 ZEUS	Low risk of bias	Low risk of bias	Unclear risk of bias	Low risk of bias	Low risk of bias "14 patients in	Low risk of bias	low risk of bias
[21]	"Randomization was	"Randomization was done by use of a central.	" open label trial"	"Review authors judge that the outcome is not	intervention group and 14 patients in control group	"All outcomes listed in the methods section	the study appears to be free of other sources of bias

	performed using an automated, validated system"	validated system that automated the random assignment of treatment groups to randomization numbers"		likely to be influenced by lack of blinding	discontinued the trial at 1 year" " reasons for discontinuation unlikely related to true outcome, administration reasons, withdrawal of consent, adverse event, death and loss to follow up"	are reported in the results section	
Silva Jr, 2013 [22]	Low risk of bias "Randomization was stratified according to donor source (deceased/living) and transplant center using computer- generated sequences"	Cow risk of bias "Randomization was stratified according to donor source and transplant center using computergenerated sequences"	Unclear risk of bias " open label trial"	Low risk of bias "Review authors judge that the outcome is not likely to be influenced by lack of blinding"	Low risk of bias " 13 patients in total withdrew at 3 months, reasons for discontinuation unlikely related to true outcome; 5 graft loss, 5 deaths, 1 lost to follow-up, 3 withdrew consent"	"All outcomes listed in the methods section are reported in the results section	Low risk of bias the study appears to be free of other sources of bias
Chhabra, 2013 [23]	Unclear risk of bias	Unclear risk of bias	Unclear risk of bias	Low risk of bias	Low risk of bias "13 out of 200	" Low risk of bias	Low risk of bias
	Method of randomization	Method of randomization and allocation	" open label trial"	"Review authors judge that the outcome is not	patients in total withdrew from the trial.	"All outcomes listed in the methods section	The study appears to be

	not mentioned in the manuscript	concealment not mentioned in the manuscript		likely to be influenced by lack of blinding"	Reasons for discontinuation unlikely related to true outcome; acute rejection at the time of randomization, withdrawal of consent or death.	are reported in the results section	free of other sources of bias
Bansal 2013 [24]	Low risk of bias "Randomization was done with the help of a computer generated Bernoulli random number table"	Low risk of bias "allocation concealment was achieved by opaque sequentially numbered sealed envelopes"	Unclear risk of bias "open label trial	"Review authors judge that the outcome is not likely to be influenced by lack of blinding"	Unclear risk of bias " 48 out of 60 randomized patients completed the trial and were included in endpoints analysis	All outcomes listed in the methods sections are reported in the results section	Low risk of bias The study appears to be free of other sources of bias
Mjornstedt, 2012 [25]	Low risk of bias "Randomization using a validated, automated system"	Cow risk of bias "Randomization was performed centrally in a 1:1 ratio, stratified by center using a validated, automated system, with investigators notified of the randomization group via the	Unclear risk of bias " open label trial"	Low risk of bias "Review authors judge that the outcome is not likely to be influenced by lack of blinding"	Low risk of bias Ten patients in each group discontinued the trial at 12 months" Reasons for discontinuation unlikely related to true outcome: withdrawal of consent (five everolimus, four	Low risk of bias "All outcomes listed in the methods section are reported in the results section"	Low risk of bias The study appears to be free of other sources of bias

		electronic case record form system"			controls), death (two in each group) and missed follow-up (two in each group).		
Guba 2012 (Follow-up of Guba 2010) [26]	Low risk of bias "Permuted block randomization scheme was used "	Low risk of bias "Allocation concealment was secured by a centralized distribution of sequentially numbered, opaque, sealed envelopes, and a confirmatory randomization fax to the clinical research organization"	Unclear risk of bias " open label trial"	Low risk of bias "Review authors judge that the outcome is not likely to be influenced by lack of blinding	Low risk of bias " a total of 8 out of 140 patients in both groups had missing data or lost to follow-up between 12 and 36 months	"All outcomes listed in the methods section are reported in the results section	Low risk of bias the study appears to be free of other sources of bias
Weir, 2011 [27]	Low risk of bias "Randomization numbers were generated in blocks with equal treatment allocation in each block. The study sponsor	Randomization numbers were generated in blocks with equal treatment allocation in each block. The study sponsor	Unclear risk of bias " open label trial"	Low risk of bias "Review authors judge that the outcome is not likely to be influenced by lack of blinding	Cow risk of bias "Of the 305 randomized patients, 39 (26%) in the MMF/ SRL group and 38 (25%) in the MMF/CNI group prematurely	"All outcomes listed in the methods section are reported in the results section	the study appears to be free of other sources of bias

	generated the subject randomization numbers that were accessible through an interactive voice–response system"	generated the subject randomization numbers that were accessible through an interactive voice—response system"			withdrew during the study treatment period		
Heilman, 2011 [28]	Low risk of bias "Treatment allocation was assigned by using a computer random number generator"	Low risk of bias "Treatment allocation was assigned by using a computer random number generator"	Unclear risk of bias "non-blinded trial"	Low risk of bias "Review authors judge that the outcome is not likely to be influenced by lack of blinding	Unclear risk of bias 15 patients in the sirolimus group and no patients in the cyclosporine group were withdrawn after randomization	"All outcomes listed in the methods section are reported in the results section	the study appears to be free of other sources of bias
Guba, 2010 [29]	Low risk of bias "Permuted block randomization scheme was used "	"Allocation concealment was secured by a centralized distribution of sequentially numbered, opaque, sealed envelopes, and a confirmatory randomization	Unclear risk of bias " open label trial"	Low risk of bias "Review authors judge that the outcome is not likely to be influenced by lack of blinding	Low risk of bias " 5 out of 140 patients overall were lost to follow-up at 12 months"	Low risk of bias "All outcomes listed in the methods section are reported in the results section	Low risk of bias the study appears to be free of other sources of bias

		fax to the clinical research organization"					
Franz, 2010 [30]	Unclear risk of bias	Unclear risk of bias	Unclear risk of bias	Low risk of bias "Review authors	Low risk of bias " 2 patients in	Low risk of bias	Low risk of bias
	"randomly assigned before transplant from a living or cadaveric donor in a masked fashion"	"randomly assigned before transplant from a living or cadaveric donor in a masked fashion"	" open label trial"	judge that the outcome is not likely to be influenced by lack of blinding	each group discontinued the trial; 1 died and 1 had primary non function in each group	"All outcomes listed in the methods section are reported in the results section"	the study appears to be free of other sources of bias
Lebranchu, 2009 [31]	"randomization was centralized and balanced, the centralized randomization was ensured via internet"	"randomization was centralized and balanced, the centralized randomization was ensured via internet"	Unclear risk of bias "open label trial"	"Review authors judge that the outcome is not likely to be influenced by lack of blinding	" one patient was withdrawn after randomization, all other patients were included in the intention-to-treat analysis"	"All outcomes listed in the methods section are reported in the results section"	the study appears to be free of other sources of bias
Durrbach 2008 [32]	Unclear risk of bias Method of randomization not specified	Unclear risk of bias Method of allocation concealment not specified	Unclear risk of bias "open label trial"	"Review authors judge that the outcome is not likely to be influenced by lack of blinding	Low risk of bias 3 of the randomized patients were not included in analysis because they did receive a kidney transplant	"All outcomes listed in the methods section are reported in the results section	the study appears to be free of other sources of bias

Ekberg, 2007	Low risk of bias	Low risk of bias	Unclear risk of	Low risk of bias	Low risk of bias	Low risk of bias	Low risk of bias
[33]	"Detiente	"Detiente	bias	"Daview authors	Developed		
	"Patients underwent	"Patients underwent	" open label trial"	"Review authors judge that the	Percentage of patients who	"All outcomes	the study
	randomization	randomization	open label that	outcome is not	withdrew consent	listed in the	appears to be
	with the use of a	with the use of a		likely to be	or were lost to	methods section	free of other
	centralized	centralized		influenced by	follow-up was	are reported in	sources of bias
	interactive	interactive		lack of blinding	balanced	the results	
	Voice-response system)"	Voice-response system"			between groups	section	
Flechner, 2007 (5-year follow-up	Low risk of bias	Low risk of bias	Unclear risk of bias	Low risk of bias	Low risk of bias	Low risk of bias	Low risk of bias
of Flechner	"Patients were	"Patients were		"Review authors	" None of the		
2002)	randomly	randomly	" open label trial"	judge that the	patients was lost	"All outcomes	the study
[34]	assigned prior to	assigned prior		outcome is not	to follow-up at 5	listed in the methods section	appears to be free of other
	transplantation by computer-	to transplantation		likely to be influenced by	years"	are reported in	sources of bias
	generated	by computer-		lack of blinding		the results	3001003 OI bid3
	selection"	generated		lack or similaring		section	
		selection"					
Buchler, 2007 [35]	Low risk of bias	Low risk of bias	Unclear risk of bias	Low risk of bias	Low risk of bias	Low risk of bias	Low risk of bias
	"Patients were	"Patients were		"Review authors	" 5 patients out of		
	randomly	randomly	" open label trial"	judge that the	150 were	"All outcomes	the study
	assigned prior to	assigned prior		outcome is not	withdrawn of the	listed in the	appears to be
	transplantation	to		likely to be influenced by	study because	methods section	free of other sources of bias
	by computer- generated	transplantation by computer-		lack of blinding	they did not receive a	are reported in the results	Sources of bias
	selection"	generated		lack of billialing	transplant"	section	
		selection"			ti di lopidi i	3331311	
Larson, 2006	Unclear risk of	Unclear risk of	Unclear risk of	Low risk of bias	Low risk of bias	Low risk of bias	Low risk of bias
[36]	bias	bias	bias				
				"Review authors	"No patient was	"All outcomes	The study
			" open label trial"	judge that the	lost to follow-up"	listed in the	appears to be

	Method of randomization not specified	Method of allocation concealment not specified		outcome is not likely to be influenced by lack of blinding		methods section are reported in the results section	free of other sources of bias
Flechner, 2002 [37]	Low risk of bias "patients were randomized by means of	Low risk of bias "patients were randomized by	Unclear risk of bias " open label trial"	Low risk of bias "Review authors judge that the outcome is not	Low risk of bias " None of the patients was lost to follow-up"	Low risk of bias "All outcomes listed in the	Low risk of bias the study appears to be
	computer- generated cards"	means of computer-generated cards"		likely to be influenced by lack of blinding		methods section are reported in the results section	free of other sources of bias
Kreis, 2000 [38]	Unclear risk of bias Method of	Unclear risk of bias Method of	Unclear risk of bias " open label trial"	Low risk of bias "Review authors judge that the	High risk of bias 10 (25%) patients at month	Low risk of bias "All outcomes	Low risk of bias The study
	randomization not specified	allocation concealment not specified		outcome is not likely to be influenced by lack of blinding	6 and 17 (43%) patients at month 12 discontinued from the protocol in the sirolimus group. In the CsA group, 5 (13%) patients at month 6 and 10 (26%) patients at month 12 discontinued from the protocol.	listed in the methods section are reported in the results section	appears to be free of other sources of bias

Groth 1999 [39]	Low risk of bias	low risk of bias	Unclear risk of bias	Low risk of bias	High risk of bias	Low risk of bias	Low risk of bias
	"Patients were randomized equally, by calling a central computer"	"Patients were randomized equally, by calling a central computer"	" open label trial"	"Review authors judge that the outcome is not likely to be influenced by lack of blinding	In sirolimus group 24 out of 41 patients discontinued the trial at 12 months In Cyclosporine group, 19 out 42 patients discontinued the trial at 12 months	"All outcomes listed in the methods section are reported in the results section	The study appears to be free of other sources of bias

Table S3: Risk of bias in included studies (Comparison 2)

Study Name	Random sequence generation	Allocation concealment	Blinding of participants and personnel	Blinding of outcomes assessment	Completeness of data	Selective outcome reporting	Other bias
Tedesco- Silva, 2015 [40]	Low risk of bias "A computer-	Low risk of bias "A computer-	Unclear risk of bias	Low risk of bias "Review authors	Low risk of bias "12 randomized patients withdrew	Low risk of bias	Low risk of bias
[40]	generated randomization sequence was obtained and placed in sequentially numbered opaque envelops"	generated randomization sequence was obtained and placed in sequentially numbered opaque envelops"	" open label trial"	judge that the outcome is not likely to be influenced by lack of blinding"	from the trial, reasons for withdrawal included patients did not receive a kidney transplant or transplanted at another center "	"All outcomes listed in the methods section are reported in the results section"	The study appears to be free of other sources of bias
Suszynski, 2013 [41]	Low risk of bias "randomized patients by nonblinded card pull"	risk of bias unclear "randomized patients by nonblinded card pull"	Unclear risk of bias " open label trial"	Low risk of bias "Review authors judge that the outcome is not likely to be influenced by lack of blinding"	Low risk of bias " Number of patients lost to follow-up was balanced between trial arms"	Low risk of bias "All outcomes listed in the methods section are reported in the results section"	The study appears to be free of other sources of bias
Takahashi, 2013 [42]	Low risk of bias "The randomization list was produced by using a validated system	Low risk of bias "The randomization list was produced by using a validated	Unclear risk of bias " open label trial"	Low risk of bias "Review authors judge that the outcome is not likely to be	"A total of eight patients discontinued the	Low risk of bias "All outcomes listed in the	Low risk of bias The study appears to be
	that automated the random assignment of treatment arms to	system that automated the random assignment of treatment arms to		influenced by lack of blinding"	study at month 12 and all of the study discontinuations	methods section are reported in the results section"	free of other sources of bias

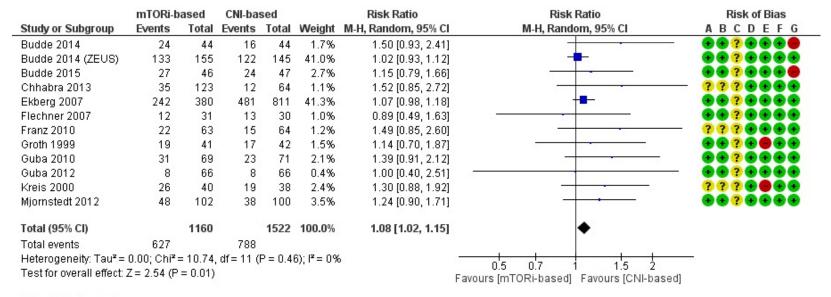
	randomization numbers"	randomization numbers"			were due to withdrawal of consent"		
Cibrik, 2013 (24 months follow-up of Silva Jr, 2010) [43]	Low risk of bias "Patients were assigned a randomization number, which was linked to one of the three treatment groups, using an interactive voice- response system"	Low risk of bias "Patients were assigned a randomization number, which was linked to one of the three treatment groups, using an interactive voice- response system"	Unclear risk of bias " open label trial"	Low risk of bias "Review authors judge that the outcome is not likely to be influenced by lack of blinding"	Low risk of bias 100 % of patients completed the trial	Low risk of bias "All outcomes listed in the methods section are reported in the results section"	Low risk of bias The study appears to be free of other sources of bias
Bertoni 2011 [44]	Unclear risk of bias Method of randomization not specified	Unclear risk of bias Method of allocation concealment not specified	Unclear risk of bias "open label trial"	Low risk of bias "Review authors judge that the outcome is not likely to be influenced by lack of blinding"	Unclear risk of bias " at 1 year, 89 patients out of 106 were evaluated"	Unclear risk of bias Outcomes wer not specified in methods section	Low risk of bias The study appears to be free of other sources of bias
Silva Jr, 2010 [45]	Low risk of bias "Patients were assigned a randomization number, which was linked to one of the three treatment groups, using an interactive voice- response system"	Low risk of bias "Patients were assigned a randomization number, which was linked to one of the three treatment groups, using an interactive voice- response system"	Unclear risk of bias " open label trial"	Low risk of bias "Review authors judge that the outcome is not likely to be influenced by lack of blinding"	Low risk of bias 100 % of patients completed the trial	Low risk of bias "All outcomes listed in the methods section are reported in the results section"	Low risk of bias The study appears to be free of other sources of bias

Supplementary Figures:

Figure S1: Risk of bias summary: review authors' judgements about each risk of bias item for each included study. (-): high risk of bias, (+): low risk of bias, (?): unclear risk of bias.

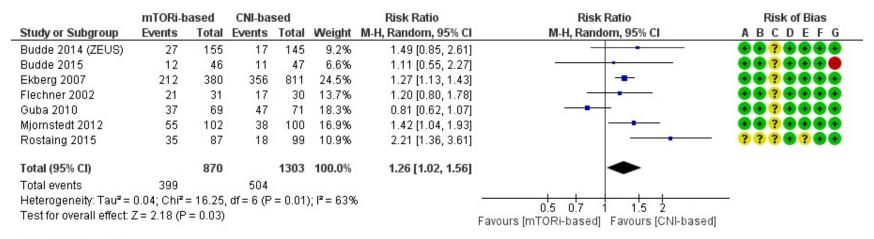
	Random sequence generation (selection bias)	Allocation concealment (selection bias)	Blinding of participants and personnel (performance bias)	Blinding of outcome assessment (detection bias)	Incomplete outcome data (attrition bias)	Selective reporting (reporting bias)	Other bias
Anil Kumar 2008	•	•	?	•	•	•	•
Bansal 2013	•	•	?	•	?	•	•
Bertoni 2011	?	?	?	•	?	?	•
Buchler 2007	•	•	?	•	•	•	•
Budde 2014	•	•	?	•	•	•	•
Budde 2014 (ZEUS)	•	•	?	•	•	•	•
Budde 2015	•	•	?	•	•	•	•
Chhabra 2013	?	?	?	•	•	•	•
Ciancio 2012	•	•	?	•	•	•	•
Cibrik 2013	•	•	?	•	•	•	•
Durrbach 2008	?	?	?	•	•	•	•
Ekberg 2007	•	•	?	•	•	•	•
Flechner 2002	•	•	?	•	•	•	•
Flechner 2007	•	•	?	•	•	•	•
Franz 2010	?	?	?	•	•	•	•
Groth 1999	•	•	?	•	•	•	•
Guba 2010	•	•	?	•	•	•	•
Guba 2012	•	•	?	•	•	•	•
Heilman 2011	•	•	?	•	?	•	•
Kreis 2000	?	?	?	•		•	•
Larson 2006	?	?	?	•	•	•	•
Lebranchu 2009	•	•	?	•	•	•	•
Machado 2004	?	?	?	•	•	•	•
Mjornstedt 2012	•	•	?	•	•	•	•
Rostaing 2015	?	?	?	•	?	•	•
Sampaio 2008	•	•	?	•	•	•	•
Silva Jr 2010	•	•	?	•	•	•	•
Silva Jr 2013	•	•	?	•	•	•	•
Suszynski 2013	•	?	?	•	•	•	•
Takahashi 2013	•	•	?	•	•	•	•
Tedesco-Silva 2015	•	•	?	•	•	•	•
Vitko 2004	?	?	?	•	•	•	•
Weir 2011	•	•	?	•	•	•	•
	_			-		-	

Figure S2: Forest plot, Comparison 1, incidence of other infections



- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- (C) Blinding of participants and personnel (performance bias)
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- (G) Other bias

Figure S3: Forest plot, Comparison 1, serious adverse events



- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- (C) Blinding of participants and personnel (performance bias)
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- (G) Other bias

Figure S4: Forest plot, comparison 1, composite of acute rejection and DSA

	mTORi-b	ased	CNI-ba	sed		Risk Ratio	Risk Ratio	Risk of Bias
Study or Subgroup	Events	Total	Events	Total	Weight	M-H, Random, 95% CI	M-H, Random, 95% CI	ABCDEFG
Bansal 2013	0	23	2	25	0.6%	0.22 [0.01, 4.29]	1 d 1 d 1 d 1 d 1	lacksquare
Buchler 2007	12	71	17	74	5.8%	0.74 [0.38, 1.43]		lacksquare
Budde 2014 (ZEUS)	27	123	15	109	6.5%	1.60 [0.90, 2.84]	 •	$lackbox{0} lackbox{0} lac$
Budde 2015	0	46	0	47		Not estimable		lacksquare
Chhabra 2013	12	123	6	64	4.1%	1.04 [0.41, 2.64]		???
Durrbach 2008	4	33	3	36	2.3%	1.45 [0.35, 6.02]		???
Ekberg 2007	160	399	170	800	9.7%	1.89 [1.58, 2.26]		$lackbox{0}$
Flechner 2007	4	31	7	30	3.2%	0.55 [0.18, 1.70]		$lackbox{0}$
Franz 2010	29	63	23	64	7.8%	1.28 [0.84, 1.95]	 -	???•••
Groth 1999	17	41	16	42	6.9%	1.09 [0.64, 1.85]	- -	$lue{lue}$
Guba 2010	34	69	29	71	8.3%	1.21 [0.83, 1.74]	+	$lackbox{0}$
Heilman 2011	14	62	3	60	2.9%	4.52 [1.37, 14.92]		$lackbox{0}$
Kreis 2000	11	40	7	38	4.6%	1.49 [0.65, 3.45]	 -	? ? ? • • • •
Larson 2006	16	81	14	84	5.9%	1.19 [0.62, 2.27]		???•••
Lebranchu 2009	17	95	10	97	5.3%	1.74 [0.84, 3.59]	+-	$\bullet \bullet ? \bullet \bullet \bullet$
Mjornstedt 2012	28	102	11	100	6.0%	2.50 [1.32, 4.74]		$lackbox{0}$
Rostaing 2015	46	96	9	98	5.9%	5.22 [2.71, 10.06]		??? • ? • •
Silva Jr 2013	28	97	64	186	8.3%	0.84 [0.58, 1.21]	-+	$\bullet \bullet ? \bullet \bullet \bullet$
Weir 2011	14	148	17	153	5.8%	0.85 [0.44, 1.66]	-	007000
Total (95% CI)		1743		2178	100.0%	1.39 [1.09, 1.77]	◆	
Total events	473		423					
Heterogeneity: Tau ² =	0.15; Chi ² :	= 51.87,	df = 17 (P < 0.0	01) ; I²=	67%	0.01 0.1 1 10 10	
Test for overall effect:	Z= 2.64 (P	= 0.008	3)				Favours [mTORi-based] Favours [CNI-based]	U

- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- (C) Blinding of participants and personnel (performance bias)
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- (G) Other bias

Figure S5: Forest plot, comparison 1, graft loss

	mTORi-b	ased	CNI-ba	sed		Risk Ratio	Risk Ratio	Risk of Bias
Study or Subgroup	Events	Total	Events	Total	Weight	M-H, Random, 95% CI	M-H, Random, 95% CI	ABCDEFG
Bansal 2013	0	23	1	25	1.6%	0.36 [0.02, 8.45]		$lackbox{0}$
Buchler 2007	4	71	1	74	3.3%	4.17 [0.48, 36.40]	- • • • • • • • • • • • • • • • • • • 	$lackbox{0} lackbox{0} lackbox{0} lackbox{0} lackbox{0} lackbox{0} lackbox{0}$
Budde 2014	3	44	1	44	3.2%	3.00 [0.32, 27.74]	- •	
Budde 2014 (ZEUS)	4	123	3	109	6.8%	1.18 [0.27, 5.16]	(- 	$lackbox{0} lackbox{0} lac$
Chhabra 2013	3	123	2	64	4.9%	0.78 [0.13, 4.55]	- -	???
Durrbach 2008	4	33	1	36	3.4%	4.36 [0.51, 37.08]		???
Ekberg 2007	33	399	45	800	38.9%	1.47 [0.95, 2.27]	 -	$lackbox{0} lackbox{0} lackbox{0} lackbox{0} lackbox{0} lackbox{0} lackbox{0}$
Flechner 2007	1	31	6	30	3.7%	0.16 [0.02, 1.26]		$lackbox{0} lackbox{0} lac$
Groth 1999	1	41	4	42	3.4%	0.26 [0.03, 2.20]		
Guba 2012	0	66	2	66	1.7%	0.20 [0.01, 4.09]		$lackbox{0} lackbox{0} lac$
Heilman 2011	1	62	2	60	2.8%	0.48 [0.05, 5.20]	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	$lackbox{0} lackbox{0} lackbox{0} lackbox{0} lackbox{0} lackbox{0} lackbox{0} lackbox{0} lackbox{0} lackbox{0}$
Kreis 2000	3	40	4	38	7.2%	0.71 [0.17, 2.98]		? ? ? • • • •
Larson 2006	3	81	3	84	6.0%	1.04 [0.22, 4.99]	(a	? ? ? • • • •
Mjornstedt 2012	0	102	0	100		Not estimable		$lackbox{0} lackbox{0} lac$
Rostaing 2015	5	96	1	98	3.4%	5.10 [0.61, 42.89]		??? * ?••
Silva Jr 2013	1	97	1	186	2.1%	1.92 [0.12, 30.32]		$lackbox{0} lackbox{0} lac$
Weir 2011	3	148	6	153	7.8%	0.52 [0.13, 2.03]		$\bullet \bullet ? \bullet \bullet \bullet \bullet$
Total (95% CI)		1580		2009	100.0%	1.10 [0.74, 1.65]	•	
Total events	69		83					
Heterogeneity: Tau ² =	0.06; Chi ² :	= 16.44	df = 15 (P = 0.3	5); I² = 9%	6	0.01 0.1 1 10 10	 00
Test for overall effect:	Z = 0.48 (P	= 0.63)					0.01 0.1 1 10 10 Favours [mTORi-based] Favours [CNI-based]	
	- 10	-					Lavoriz [IIII Okt-hazeri] Lavoriz [Old-hazeri]	

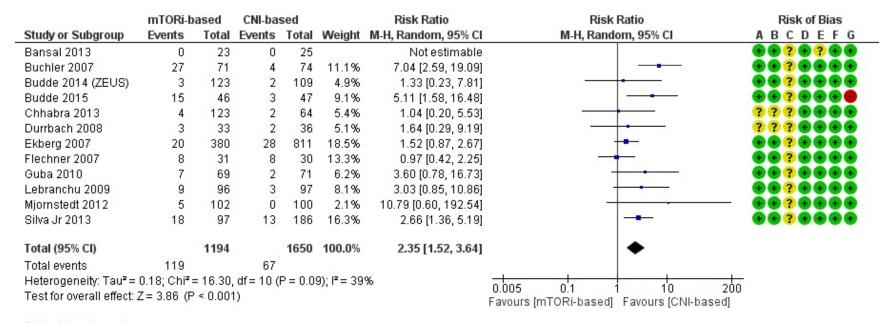
- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- (C) Blinding of participants and personnel (performance bias)
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- (G) Other bias

Figure S6: Forest plot, comparison 1, polyoma associated nephropathy

	mTORi-b	ased	CNI-bas	sed		Risk Ratio	Risk Ratio	Risk of Bias
Study or Subgroup	Events	Total	Events	Total	Weight	M-H, Random, 95% CI	M-H, Random, 95% CI	ABCDEFG
Larson 2006	4	81	7	84	72.0%	0.59 [0.18, 1.95]		??? 🕶 🖶 🖶
Mjornstedt 2012	1	102	2	100	17.9%	0.49 [0.05, 5.32]	-	$lackbox{0.5}{\bullet} lackbox{0.5}{\bullet} lac$
Rostaing 2015	0	96	1	98	10.0%	0.34 [0.01, 8.25]	•	??? • ? • •
Total (95% CI)		279		282	100.0%	0.54 [0.20, 1.49]	•	
Total events	5		10					
Heterogeneity: Tau² = Test for overall effect:			•	= 0.95)	; I² = 0%		0.005 0.1 1 10 Favours [mTORi-based] Favours [CNI-ba	200 sed]

- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- (C) Blinding of participants and personnel (performance bias)
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- (G) Other bias

Figure S7: Forest plot, comparison 1, Proteinuria



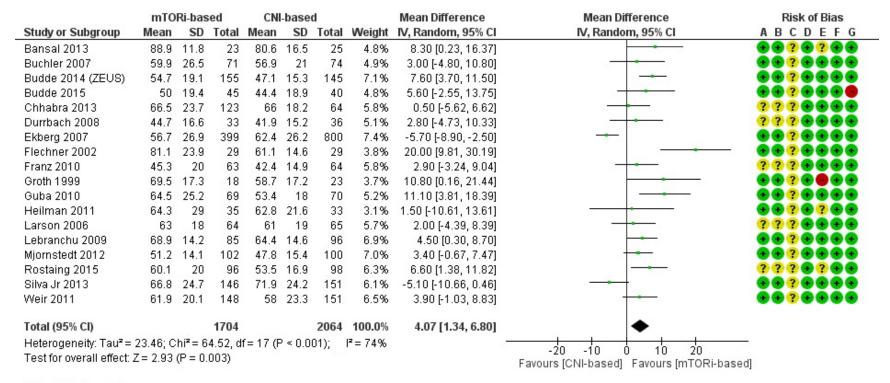
- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- (C) Blinding of participants and personnel (performance bias)
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- (G) Other bias

Figure S8: Forest plot, comparison 1, wound healing complications

	mTORi-b	ased	CNI-bas	sed		Risk Ratio	Risk Ratio	Risk of Bias
Study or Subgroup	Events	Total	Events	Total	Weight	M-H, Random, 95% CI	M-H, Random, 95% CI	ABCDEFG
Buchler 2007	7	71	0	74	1.0%	15.63 [0.91, 268.61]		- + + ? + + +
Budde 2015	1	46	1	47	1.1%	1.02 [0.07, 15.85]		$lue{lue}$
Durrbach 2008	3	33	1	36	1.6%	3.27 [0.36, 29.93]	<u> </u>	???•••
Ekberg 2007	63	380	82	811	85.4%	1.64 [1.21, 2.22]		$lackbox{0} lackbox{0} lac$
Flechner 2007	2	31	0	30	0.9%	4.84 [0.24, 96.89]	20 To 10 To	$lackbox{0.5}{\ }lackbox{0.5}{\ }lackbox{0.5}{\lackbox{0.5}{\ }lackbox{0.5}{\lackbox{0.5}{\ }lackbox{0.5}{\lackbox{0.5}{\lackbox{0.5}{\lackbox{0.5}{\lack$
Franz 2010	2	63	1	64	1.4%	2.03 [0.19, 21.85]	()	???•••
Guba 2010	7	69	8	71	8.6%	0.90 [0.35, 2.35]		$\bullet \bullet ? \bullet \bullet \bullet$
Total (95% CI)		693		1133	100.0%	1.62 [1.22, 2.15]	•	
Total events	85		93					
Heterogeneity: Tau ² =	0.00; Chi ²	= 5.04,	df = 6 (P	= 0.54)	$ ^2 = 0\%$		0.005 0.1 1 10 2	
Test for overall effect:	Z = 3.36 (F	o < 0.00	1)				Favours [mTORi-based] Favours [CNI-based	

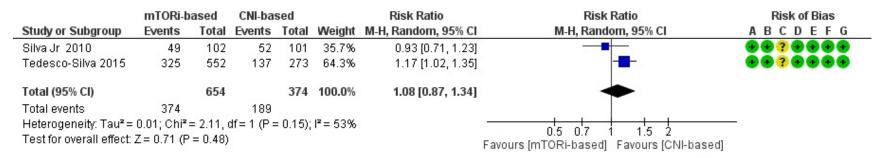
- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- (C) Blinding of participants and personnel (performance bias)
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- (G) Other bias

Figure S9: Forest plot, comparison 1, estimated GFR



- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- (C) Blinding of participants and personnel (performance bias)
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- (G) Other bias

Figure S10: Forest plot, comparison 2, other infections



- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- (C) Blinding of participants and personnel (performance bias)
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- (G) Other bias

Figure S11: Forest plot, comparison 2, serious adverse events

	mTORi-b	ased	CNI-based			Risk Ratio	Risk Ratio	Risk of Bias
Study or Subgroup	Events	Total	Events	Total	Weight	M-H, Random, 95% CI	M-H, Random, 95% CI	ABCDEFG
Cibrik 2013	371	552	168	273	38.8%	1.09 [0.98, 1.22]	 -	$lackbox{0}$
Takahashi 2013	27	61	33	61	27.1%	0.82 [0.57, 1.18]	-	$lackbox{0} lackbox{0} lackbox{0} lackbox{0} lackbox{0} lackbox{0} lackbox{0} lackbox{0} lackbox{0} lackbox{0}$
Tedesco-Silva 2015	52	102	74	101	34.1%	0.70 [0.56, 0.87]		$\bullet \bullet ? \bullet \bullet \bullet$
Total (95% CI)		715		435	100.0%	0.87 [0.62, 1.20]		
Total events	450		275					
Heterogeneity: Tau ² =	0.07; Chi²	= 13.66	df = 2 (P)	= 0.00	1); $I^2 = 85$	%	05 07 1 15 2	
Test for overall effect:	Z = 0.86 (P	= 0.39)					0.5 0.7 1 1.5 2 Favours [mTORi-based] Favours [CNI-based]	

- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- (C) Blinding of participants and personnel (performance bias)
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- (G) Other bias

Figure S12: Forest plot, comparison 2, acute rejection

	mTORi-b	ased	CNI-bas	sed		Risk Ratio	Risk Ratio	Risk of Bias
Study or Subgroup	Events	Total	Events Total V		Weight	M-H, Random, 95% CI	M-H, Random, 95% CI	ABCDEFG
Bertoni 2011	10	56	9	56	7.1% 1.11 [0.49, 2.52]			??? ? • ?? •
Cibrik 2013	97	552	53	273	52.8%	0.91 [0.67, 1.22]		$lackbox{0} lackbox{0} lac$
Suszynski 2013	25	140	40	151	24.4%	0.67 [0.43, 1.05]	· · · · · · · · · · · · · · · · · · ·	\bullet ? ? \bullet \bullet \bullet
Takahashi 2013	3	61	5	61	2.5%	0.60 [0.15, 2.40]	·	$lackbox{0} lackbox{0} lac$
Tedesco-Silva 2015	19	102	16	101	13.1%	1.18 [0.64, 2.15]		$\bullet \bullet ? \bullet \bullet \bullet$
Total (95% CI)		911		642	100.0%	0.88 [0.70, 1.09]	•	
Total events	154		123					
Heterogeneity: Tau ² =								
Test for overall effect:	Z=1.19 (P	= 0.23)					0.1 0.2 0.5 1 2 5 10 Favours [mTORi-based] Favours [CNI-based]	

- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- (C) Blinding of participants and personnel (performance bias)
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- (G) Other bias

Figure S13: Forest plot, comparison 2, graft loss

	mTORi-b	ased	CNI-bas	sed		Risk Ratio	Risk Ratio	Risk of Bias
Study or Subgroup	Events	Total	Events Total V		Weight M-H, Random, 95% CI		M-H, Random, 95% CI	ABCDEFG
Bertoni 2011	3	56	6	50	10.6%	0.45 [0.12, 1.69]	•	??? ? • ??
Cibrik 2013	33	552	11	273	28.8%	1.48 [0.76, 2.89]	 •	$lackbox{0} lackbox{0} lac$
Suszynski 2013	48	140	43	151	50.0%	1.20 [0.86, 1.69]	+-	lacksquare
Takahashi 2013	0	61	0	61		Not estimable		$lackbox{0} lackbox{0} lac$
Tedesco-Silva 2015	3	102	7	101	10.7%	0.42 [0.11, 1.60]	-	$\bullet \bullet ? \bullet \bullet \bullet$
Total (95% CI)		911		636	100.0%	1.03 [0.64, 1.65]	•	
Total events	87		67					
Heterogeneity: Tau ² =	0.09; Chi²	= 4.76, (df = 3 (P =	0.19);	$I^2 = 37\%$		04 02 05 4 2 5 40	
Test for overall effect:	Z = 0.12 (P	= 0.90)					0.1 0.2 0.5 1 2 5 10 Favours [mTORi-based] Favours [CNI-based]

- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- (C) Blinding of participants and personnel (performance bias)
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- (G) Other bias

Figure S14: Forest plot, comparison 2, CMV disease

	mTORi-b	ased	CNI-based		CNI-based			Risk Ratio	Risk Ratio	Risk of Bias
Study or Subgroup	Events	Total	Events	Total	Weight	M-H, Random, 95% CI	M-H, Random, 95% CI	ABCDEFG		
Cibrik 2013	5	552	8	273	20.4%	0.31 [0.10, 0.94]	-	$lackbox{0.5}{\bullet} lackbox{0.5}{\bullet} lac$		
Suszynski 2013	19	140	29	151	34.9%	0.71 [0.42, 1.20]		lacksquare		
Takahashi 2013	3	61	21	61	19.5%	0.14 [0.04, 0.45]	-	$lackbox{0.5}{\bullet} lackbox{0.5}{\bullet} lac$		
Tedesco-Silva 2015	7	102	12	101	25.2%	0.58 [0.24, 1.41]		$\bullet \bullet ? \bullet \bullet \bullet$		
Total (95% CI)		855		586	100.0%	0.42 [0.21, 0.82]	•			
Total events	34		70							
Heterogeneity: Tau ² =	0.28; Chi²	= 7.18,	df = 3 (P =	= 0.07);	$I^2 = 58\%$		0.01 0.1 1 10	100		
Test for overall effect:	Z= 2.52 (P	= 0.01)					Favours [mTORi-based] Favours [CNI-ba	100 sed]		

- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- (C) Blinding of participants and personnel (performance bias)
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- (G) Other bias

Figure S15: Forest plot, comparison 2, proteinuria

	mTORi-b	ased	CNI-bas	sed		Risk Ratio	Risk Ratio	Risk of Bias
Study or Subgroup	Events	Total	Events	Total	Weight	M-H, Random, 95% CI	M-H, Random, 95% CI	ABCDEFG
Cibrik 2013	69	552	22	22 273		1.55 [0.98, 2.45]		$\bullet \bullet ? \bullet \bullet \bullet$
Takahashi 2013	8	61	5	61	10.4%	1.60 [0.55, 4.62]	-	$\bullet \bullet ? \bullet \bullet \bullet$
Tedesco-Silva 2015	21	102	16	101	33.7%	1.30 [0.72, 2.34]	-	$\bullet \bullet ? \bullet \bullet \bullet$
Total (95% CI)		715		435	100.0%	1.47 [1.04, 2.06]	•	
Total events	98		43					
Heterogeneity: Tau² = Test for overall effect:				= 0.88);	l² = 0%		0.1 0.2 0.5 1 2 5 10 Favours [mTORi-based] Favours [CNI-based]	_

- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- (C) Blinding of participants and personnel (performance bias)
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- (G) Other bias

Figure S16: Forest plot, comparison 2, wound healing complications

	mTORi-b	ased	CNI-bas	sed		Risk Ratio	Risk Ratio	Risk of Bias
Study or Subgroup	Events	Total	Events	Events Total V		M-H, Random, 95% CI	M-H, Random, 95% CI	ABCDEFG
Silva Jr 2010	204	552	70	273	49.4%	1.44 [1.15, 1.81]	-	$lackbox{0}$
Takahashi 2013	24	61	7	61	17.7%	3.43 [1.60, 7.36]	-	$lackbox{0.5}{\bullet} lackbox{0.5}{\bullet} lac$
Tedesco-Silva 2015	35	102	23	101	32.9%	1.51 [0.96, 2.36]	-	$\bullet \bullet ? \bullet \bullet \bullet$
Total (95% CI)		715		435	100.0%	1.71 [1.16, 2.50]	•	
Total events	263		100					
Heterogeneity: Tau² =	0.06; Chi²	= 4.58,	df = 2 (P =	0.10);	$I^2 = 56\%$		0.1 0.2 0.5 1 2 5 10	_
Test for overall effect:	Z = 2.73 (P	= 0.008	6)				Favours [mTORi-based] Favours [CNI-based]	

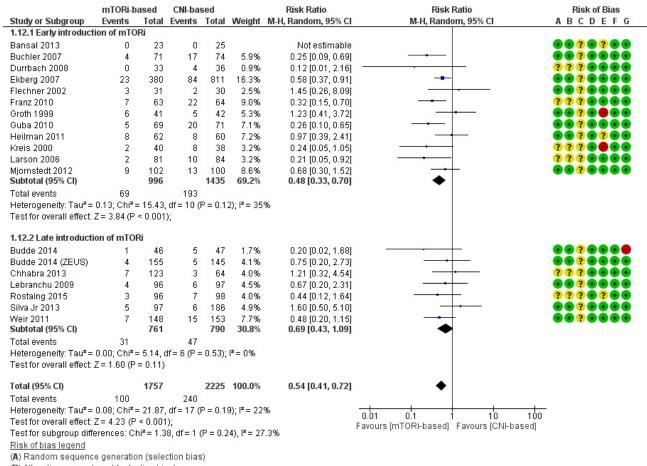
- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- (C) Blinding of participants and personnel (performance bias)
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- (G) Other bias

Figure S17: Forest plot, comparison 2, estimated GFR

	mT()Ri-bas	ed	CN	II-based	1		Mean Difference	Mean Difference	Risk of Bias
Study or Subgroup	Mean	SD	Total	Mean	SD	Total	Weight	IV, Random, 95% CI	IV, Random, 95% CI	ABCDEFG
Bertoni 2011	81.64	32.67	56	62.62	22.81	50	17.6%	19.02 [8.38, 29.66]		???•??•
Silva Jr 2010	55.6	19.9	556	54.4	26.4	273	25.2%	1.20 [-2.34, 4.74]	+	$lackbox{0} lackbox{0} lac$
Suszynski 2013	65.2	70	140	61.1	77	151	11.6%	4.10 [-12.79, 20.99]	- •	$lackbox{0.7}{\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ $
Takahashi 2013	62	19	56	56.3	15.2	58	22.5%	5.70 [-0.63, 12.03]	-	$lackbox{0} lackbox{0} lac$
Tedesco-Silva 2015	60.6	20.9	102	69.5	21.5	101	23.1%	-8.90 [-14.73, -3.07]	-	$\bullet \bullet ? \bullet \bullet \bullet$
Total (95% CI)			910			633	100.0%	3.36 [-4.31, 11.02]	-	
Heterogeneity: Tau ² = Test for overall effect:				= 4 (P <	0.001);	-20 -10 0 10 20 Favours [CNI-based] Favours [mTORi-based	-]]			

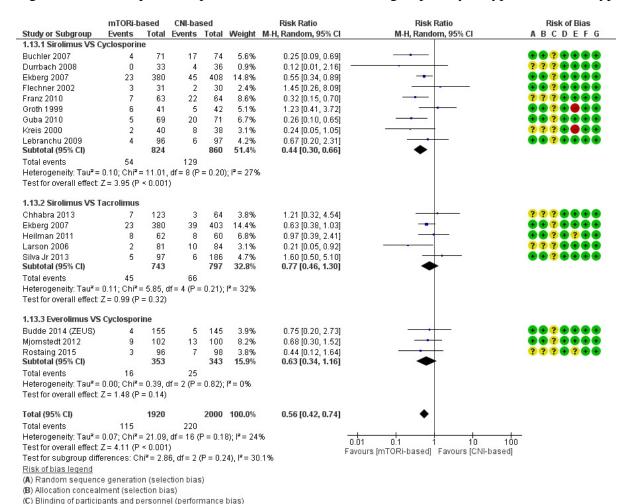
- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- (C) Blinding of participants and personnel (performance bias)
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- (G) Other bias

Figure S18: Forest plot, comparison 1, CMV infection subgroup analysis early vs late introduction of mTORi



- (B) Allocation concealment (selection bias)
- (C) Blinding of participants and personnel (performance bias)
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- (G) Other bias

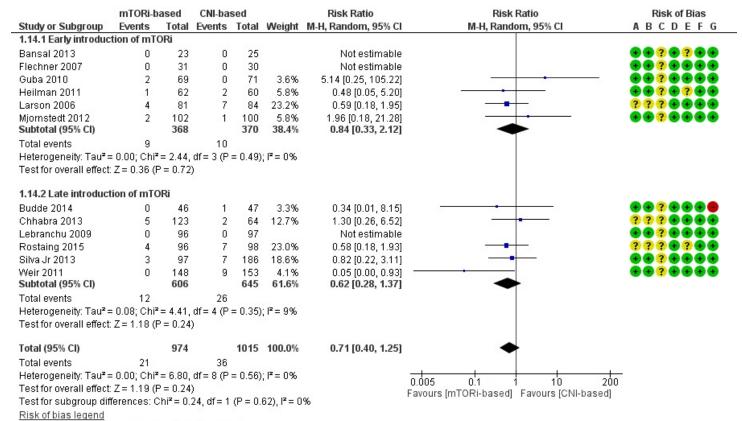
Figure S19: Forest plot, comparison 1, CMV infection subgroup analysis type of CNI and type of mTORi



(D) Blinding of outcome assessment (detection bias)
(E) Incomplete outcome data (attrition bias)
(F) Selective reporting (reporting bias)

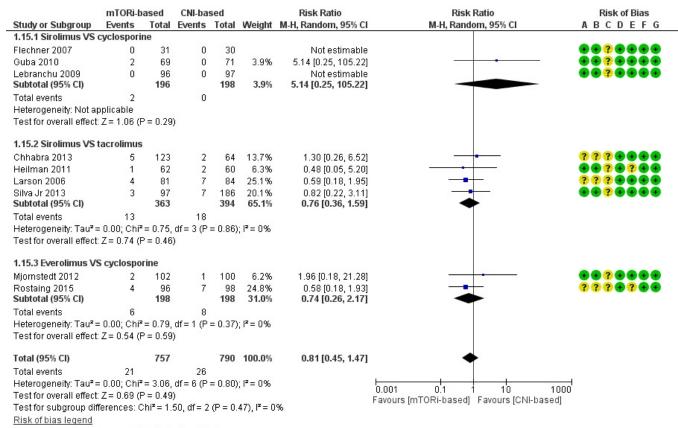
(G) Other bias

Figure S20: Forest plot, comparison 1, BKPyV infection subgroup analysis early vs late introduction of mTORi



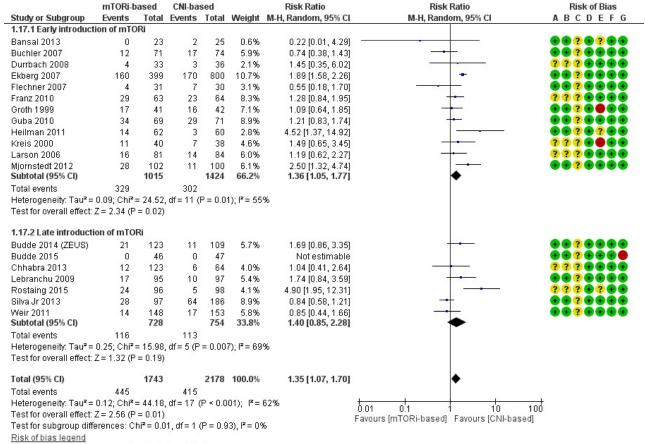
- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- (C) Blinding of participants and personnel (performance bias)
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- (G) Other bias

Figure S21: Forest plot, comparison 1, BKPyV infection subgroup analysis type of CNI and type of mTORi



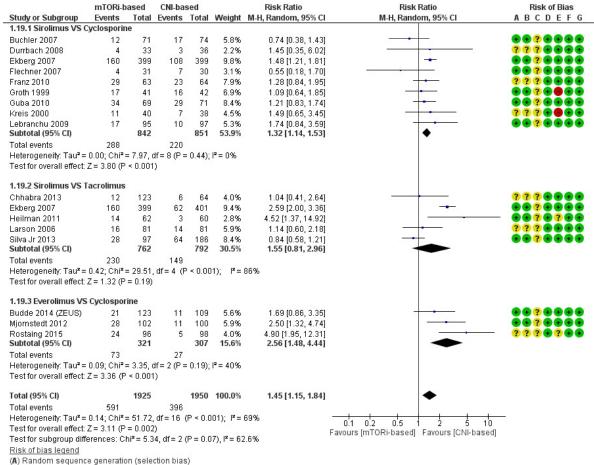
- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- (C) Blinding of participants and personnel (performance bias)
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- (G) Other bias

Figure S22: Forest plot, comparison 1, acute rejection subgroup analysis early vs late introduction of mTORi



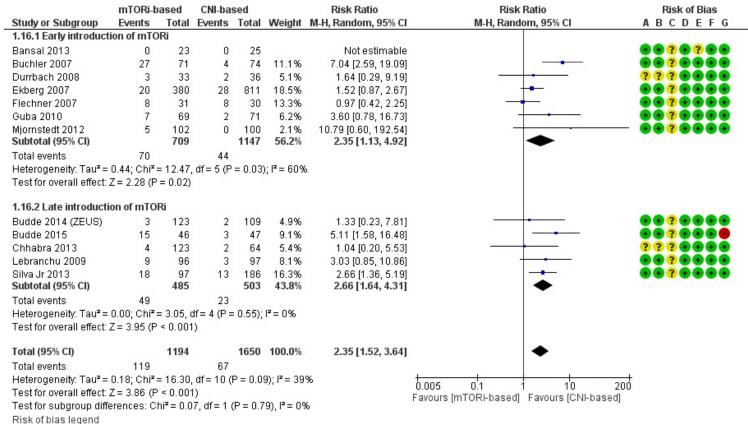
- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- (C) Blinding of participants and personnel (performance bias)
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- (G) Other bias

Figure S23: Forest plot, comparison 1, acute rejection subgroup analysis type of CNI and type of mTORi



- (B) Allocation concealment (selection bias)
- (C) Blinding of participants and personnel (performance bias)
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- (G) Other bias

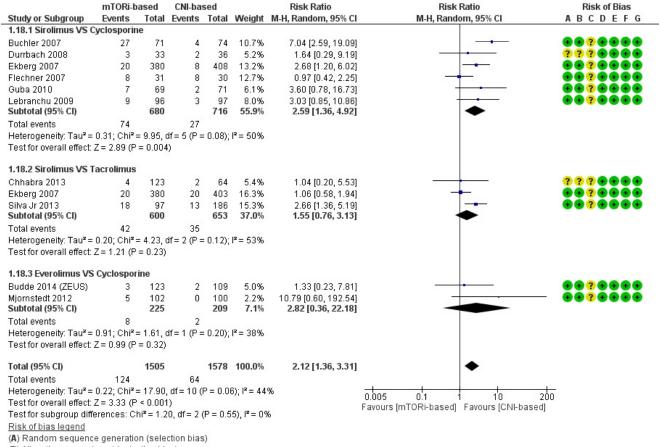
Figure S24: Forest plot, comparison 1, proteinuria subgroup analysis early vs late introduction of mTORi



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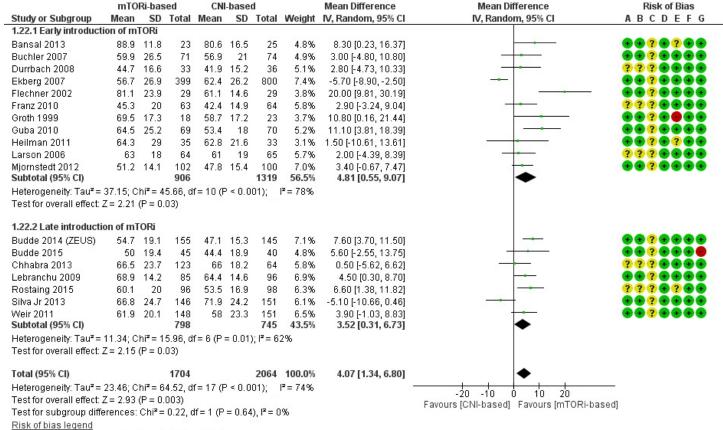
- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- (C) Blinding of participants and personnel (performance bias)
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- (G) Other bias

Figure S25: Forest plot, comparison 1, proteinuria subgroup analysis type of CNI and type of mTORi



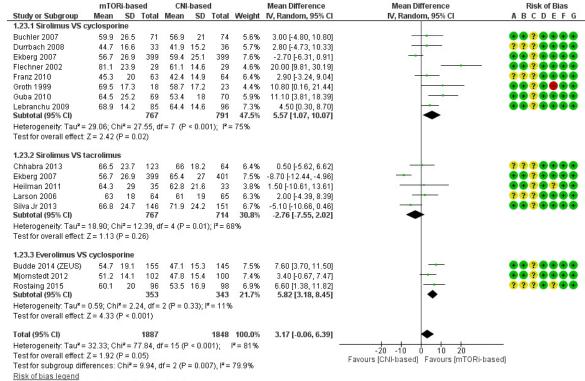
- (B) Allocation concealment (selection bias)
- (C) Blinding of participants and personnel (performance bias)
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- (G) Other bias

Figure S26: Forest plot, comparison 1, estimated GFR subgroup analysis early vs late introduction of mTORi



- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- (C) Blinding of participants and personnel (performance bias)
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- (G) Other bias

Figure S27: Forest plot, comparison 1, estimated GFR subgroup analysis type of CNI and type of mTORi



(A) Random sequence generation (selection bias)

- (B) Allocation concealment (selection bias)
- (C) Blinding of participants and personnel (performance bias)
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- (G) Other bias