

## Supplementary materials

### Tables:

**Table S1: Demography of the study participants**

	Study Group	Number	Number of subjects with complete data	Drop off rate (%)	Male (%)	Mean or median age
<b>Budania et al 2013</b>	Ranolazine	38	38	*0	63	58
	Placebo	38	38	0	68	57
<b>Eckel et al 2015</b>	Ranolazine	232	199	14.2	47	55
	Placebo	232	195	14.7	51	56
<b>Kipnes et al 2011</b>	Ranolazine	39	31	20.5	59	58
	Placebo	41	29	29.3	61	58
<b>Kosiborod et al 2013</b>	Ranolazine	470	462	1.7	61	63
	Placebo	474	465	1.9	62	64
<b>Morrow 2009 et al 2009</b>	Ranolazine	2441	2108 (all) 707 (diabetic)	13.6 (all)	67 (all) 60 (diabetic)	median 63 (all) median 64 (diabetic)
	Placebo	2477	2198 (all) 770 (diabetic)	11.4 (all)	64 (all) 57 (diabetic)	median 63 (all) median 65 (diabetic)
<b>Pettus et al 2015 - Glimepiride add-on study</b>	Ranolazine	215	184	14.4	44	59
	Placebo	216	188	13	43	59
<b>Pettus et al 2015 - Metformin add-on study</b>	Ranolazine	220	179	18.6	45	56
	Placebo	222	174	21.6	56	56
<b>Timmis et al 2005</b>	Ranolazine 1000mg BD	64	47	26.6	72 (all)	65 (all)
	Ranolazine 750mg BD	68	47	30.9		
	Placebo	57	37	35.1		

\*Study not suggested any drop out after subjects commenced on trial.

**Table S2: Concomitant antidiabetic medication**

Study, Year	Study Group	Concomitant antidiabetic medications					Comment
		Any	Metformin (%)	Sulphonylurea (%)	Others	Insulin	
<b>Budania et al 2013</b>	Ranolazine	n/a	55.3	81.6	0	0	
	Placebo	n/a	57.9	78.9	2.6	0	
<b>Eckel et al 2015</b>	Ranolazine	None.	0	0	0	0	
	Placebo	See*a	0	0	0	0	
<b>Kipnes et al 2011</b>	Ranolazine	n/a	n/a	n/a	n/a	0	See *b.
	Placebo	n/a	n/a	n/a	n/a	0	
<b>Kosiboro et al 2013</b>	Ranolazine	93.3				17.5	
	Placebo	92.7				20.6	
<b>Morrow et al 2009</b>	Ranolazine	20.3 (all) 61.5 (diabetic)	n/a	n/a	n/a	8.1 (all) 25.3 (diabetic)	
	Placebo	21.3 (all) 60.6 (diabetic)	n/a	n/a	n/a	9.3 (all) 26.1 (diabetic)	
<b>Pettus et al 2015 - Glimepiri de add-on study</b>	Ranolazine	100	0	100	0	0	See *c.
	Placebo	100	0	100	0	0	
<b>Pettus et al 2015 - Metformin add-on study</b>	Ranolazine	100	100	0	0	0	
	Placebo	100	100	0	0	0	
<b>Timmis et al 2005</b>	Ranolazine 1000mg BD	71.9	29.7	48.4	3.2	17.2	See *d.
	Ranolazine 750mg BD	61.8	25	47.1	5.9	19.1	
	Placebo	68.4	28.1	33.3	5.3	19.3	

\*a. Treatment naïve or washed off antihyperglycemic for >90 days

\*b. This meta-analysis has used full analysis data instead of "per protocol" data. Unable to postulate percentage of patient on metformin or sulphonylurea respectively. Study

provided information below:

Metformin only: Ranolazine 33%, Placebo 49%

Metformin + Sulphonylurea: Ranolazine 46%, Placebo 29%

Metformin + others: Ranolazine 13%, Placebo 7%

Metformin + Sulphonylurea + others: Ranolazine 5%, Placebo 5%

Sulphonylurea only: Ranolazine 3%, Placebo 10%

\*c. Previous antidiabetic medications before starting on glimepiride:

Metformin: Ranolazine 37.2%, placebo 38.9%

Sulphonylurea: Ranolazine 62.8%, 61.1%

\*d. This meta-analysis only considered post-treatment FPG change in patients with diabetes, hence has not included data for post-treatment FPG change in non-patients with diabetes.

### Table S3: Excluded studies

Study	Reason for exclusion
<b>Chrisholm 2010</b>	This study has used the same data as <i>Morrow</i> 2009 who also performed post-hoc analysis on MERLIN-TIMI-36 trial. <i>Morrow</i> 2009, instead of <i>Chrisholm</i> 2010, was included in this meta-analysis as it provided more complete numerical data.
<b>Sandhiya 2015</b>	This trial compares Ranolazine to trimetazidine instead of placebo.

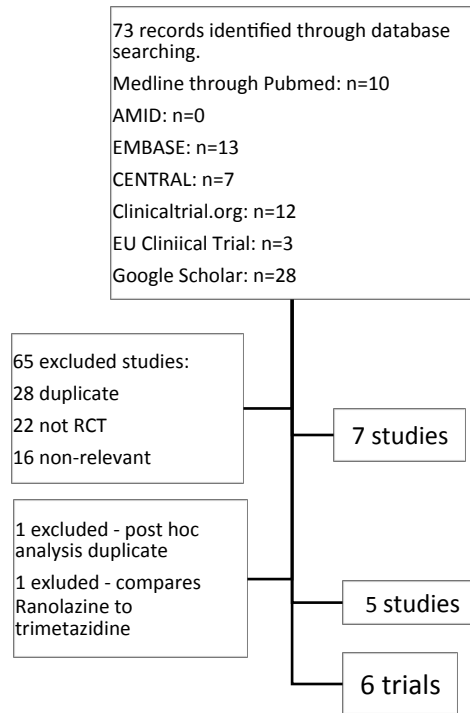
**Table S4: Outcome measures and patient groups**

Study, Year	Outcome measure			Patient group	
	HbA1c	FPG	Hypoglycaemia incidence	Diabetes	Without diabetes
<b>Budania et al. 2013</b>	x	✓	x	✓	x
<b>Eckel et al. 2015</b>	✓	✓	✓	✓	x
<b>Kipnes et al. 2011</b>	✓	✓	✓	✓	x
<b>Kosiborod et al. 2013</b>	x	x	✓	✓	x
<b>Morrow et al. 2009</b>	✓	x	x	✓	✓
<b>Pettus et al. 2016 – Glimepiride add-on study</b>	✓	✓	✓	✓	x
<b>Pettus et al. 2016 – Metformin add-on study</b>	✓	✓	✓	✓	x
<b>Timmis et al. 2005</b>	✓	✓	x	✓	✓

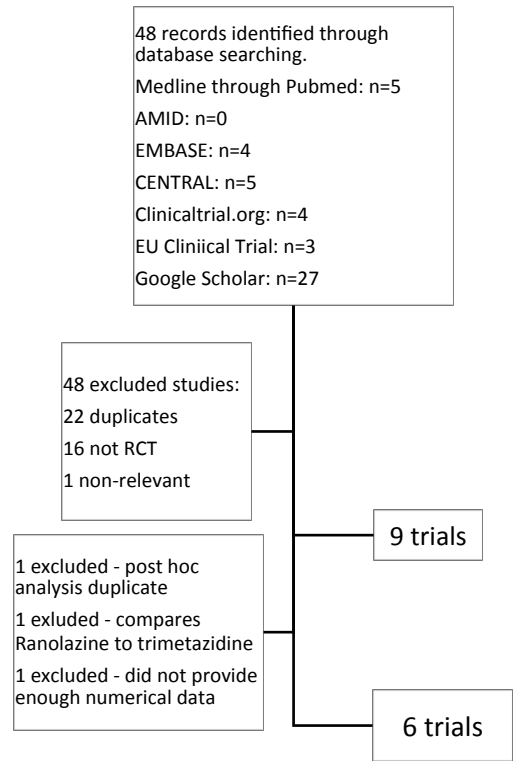
**Table S5: Assessment of risk of bias**

	Random sequence generation	Allocation concealment	Blinding of participants and personnel	Blinding of outcome assessment	Incomplete outcome data	Other bias
Budania 2013						
Eckel 2015						
Kipnes 2011						
Kosiborod 2013						
Morrow 2009						
Pettus 2015 – Glimepiride add-on study						
Pettus 2015 – Metformin add-on study						
Timmis 2005						

**Supplementary figures:**



**Figure S1 Flow diagram of the selection process for studies analysed for HbA1c**



**Figure S2 Flow diagram for studies analysed for fasting plasma glucose**