Supplementary Material

Catheter ablation for ventricular tachycardia after myocardial infarction: a reconstructed individual patient data meta-analysis of randomised controlled trials

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Section 1 – Search strategies

Cochrane

ID	SearchHits
#1	MeSH descriptor: [Tachycardia, Ventricular] explode all trees
#2	Ventricular tachycard*
#3	VT
#4	V TACH
#5	Ventricular Tachyarrhythmia*
#6	premature ventricular complex
#7	premature ventricular beat*
#8	ventricular ectopic
#9	ventricular fibrillation
#10	VA
#11	PVC
#12	PVE
#13	PVB
#14	heart ventricular tachycard*
#15	cardiac ventricular tachycard*
#16	heart ventricular tachycard*
#17	#1 or #2 or #3 or #4 or #5 #6 or #7 or #8 or #9 or #10 or #11 or #12 or #13 or #14 #15 or #16
#18	ablation or radioablation
#19	MeSH descriptor: [Catheter Ablation] explode all trees
#20	MeSH descriptor: [Ablation Techniques] explode all trees
#21	#19 or #20
#22	#17 and #21

Embase

1	exp heart ventricle tachycardia/
2	Ventricular tachycard*.mp.
3	VT.mp.
4	V TACH.mp.

5 Ventricular Tachyarrhythmia.mp.*
6 premature ventricular complex.mp.
7 premature ventricular beat.mp.*
8 ventricular ectopic.mp.
9 ventricular fibrillation.mp.
10 VA.mp.
11 PVC.mp.
12 pve.mp.
13 pvb.mp.
14 heart ventricular tachycard.mp.*
15 cardiac ventricular tachycard.mp.*
16 heart ventricular tachycard.mp.*
17 1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9 or 10 or 11 or 12 or 13 or 14 or 15 or 16
18 (ablation or radioablation).mp.
19 exp catheter ablation/
20 exp radiofrequency ablation/
21 18 or 19 or 20 191377
22 exp randomized controlled trial/
23 ((random or randomly or randomized or randomised) adj3 (study or trial or allocation or assignment)).mp.
24 ((noninferiority or "non inferiority") adj3 (trial or study)).mp.
25 (superiority adj3 (trial or study)).mp.
26 RCT.mp.
27 (controlled clinical adj3 (trial or study)).mp.
28 exp controlled clinical trial/
29 22 or 23 or 24 or 25 or 26 or 27 or 28
30 17 and 21 and 29
31 limit 30 to english language

Medline

1 exp Tachycardia, Ventricular/
2 Ventricular tachycard.mp.*
3 VT.mp.

4 V TACH.mp.
5 Ventricular Tachyarrhythmia*.mp.
6 premature ventricular complex.mp.
7 premature ventricular beat*.mp.
8 ventricular ectopic.mp.
9 ventricular fibrillation.mp.
10 VA.mp.
11 PVC.mp.
12 PVE.mp.
13 PVB.mp.
14 heart ventricular tachycard*.mp.
15 cardiac ventricular tachycard*.mp.
16 heart ventricular tachycard*.mp.
17 1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9 or 10 or 11 or 12 or 13 or 14 or 15 or 16
18 (ablation* or radioablation).mp.
19 exp Catheter Ablation/
20 exp Ablation Techniques/
21 18 or 19 or 20
22 randomized controlled trial.pt.
23 controlled clinical trial.pt.
24 clinical trial.pt.
25 exp Randomized Controlled Trial/
26 ((random or randomly or randomized or randomised) adj3 (study or trial or allocation or assignment)).mp.
27 exp Randomized Controlled Trials as Topic/
28 ((noninferiority or "non inferiority") adj3 (trial or study)).mp.
29 (superiority adj3 (trial or study)).mp.
30 RCT.mp.
31 exp Clinical Trial/
32 (controlled clinical adj3 (trial or study)).mp.
33 22 or 23 or 24 or 25 or 26 or 27 or 28 or 29 or 30 or 31 or 32
34 17 and 21 and 33
35 exp Animals/

36 ***exp Humans/***
37 ***35 not 36***
38 ***34 not 37***
39 ***limit 38 to english language***

Section 2 – Supplementary tables

Table S1. Characteristics of recruited patients

Study Name	Year*	Region	N	Age**	% Male	LVEF %	% MI***
SMASH-VT	2007	USA	128	66.5	86.5	31.8	100
VTACH	2010	Europe (Germany, Switzerland, Czech Republic, Denmark)	107	66,1	93.5	34.1	100
CALYPSO	2014	USA	27	64.5	93.0	24.0	100
VANISH	2016	North America, Europe, Australia	259	68.7	93.1	31.2	100
SMS	2017	Europe (Germany, Czech Republic, Denmark)	111	67.2	84.0	31.2	97

ERASE VT	2017	UK	51	69.0	98.0	32.0	100
PARTITA	2022	Europe (Italy, Switzerland, Portugal, France, Germany)	47	68.4	85.0	32.2	81
SURVIVE VT	2022	Spain	144	70.5	69.0	34.0	100
PAUSE SCD	2022	Asia (China, Japan, South Korea, Taiwan)	121	55.0	81.0	40.0	42

*Year of publication

**Mean age of recruited participants

***Proportion of recruited patients with prior MI

Table S2. Risk of bias assessment

Trial	*Risk of bias arising from the randomisation process*	*Risk of bias due to deviations from intended intervention*	*Risk of bias due to missing outcome data*	*Risk of bias in measurement of the outcome*	*Risk of bias in selection of the reported result*	***Overall Quality***
SMASH-VT	Low risk Randomisation process not specified Sealed, pre-numbered envelopes	Some concerns Un-blinded	Low risk Appropriate management of minimal loss to follow up	Unclear Not specified but stated to be an unblinded trial	Low risk All endpoints on CT.gov reported	**High** **An appropriately conducted open-label trial.**
VTACH	Low risk Stratified permuted blocks from pseudo random numbers Centralised allocation with sealed opaque envelopes	Some concerns Un-blinded	Low risk Appropriate management of minimal loss to follow up	Low risk External validation of EGMs with further external independent adjudicator	Low risk All endpoints on CT.gov reported	**Unclear** **Unclear if ICD programming differed in groups**
CALYPSO	High risk Un-blinded randomisation	Some concerns Un-blinded	Low risk No loss to follow up	Some concerns Not specified but stated to be an unblinded trial	Low risk All endpoints on CT.gov reported	**High** **An appropriately conducted open-label trial**
VANISH	Some concerns Block randomisation with randomly permuted block sizes of 2 and 4 from	Some concerns Un-blinded	Low risk Appropriate management of minimal loss to follow up and crossover	Low risk Blinded adjudication of clinical events	Low risk All endpoints on CT.gov reported	**High** **An appropriately conducted and reported open-label trial**

	computerised random-number generator. Sequentially numbered, opaque, sealed envelopes					
SMS	Some concerns Stratified by medication (BB/Amiodarone) but otherwise unspecified	Some concerns Un-blinded	Low risk Appropriate management of minimal loss to follow up	Low risk External validation of EGMs	Low risk All endpoints on CT.gov reported	**High** **An appropriately conducted open-label trial**
ERASE-VT	High risk Computer-generated sequence Open label	Some concerns Un-blinded	Low risk Minimal loss to follow up. Cardiovascular outcomes reported for all randomised participants in intention to treat fashion.	Low risk All endpoints analysed in a blinded fashion	Low risk All endpoints on CT.gov reported on request from authors.	**High** **An appropriately conducted open-label trial**
PARTITA	Some concerns Details of randomization, allocation concealment not stated	Some concerns Un-blinded	Low risk Appropriate management of minimal loss to follow up	Some concerns Not stated	Low risk All endpoints on CT.gov reported	**Intermediate** **An overall well conducted open-label trial but details of randomisation, allocation concealment and endpoint adjudication unclear**
SURVIVE VT	Low risk Permuted blocks of size 4 from random-number generator Sealed opaque envelopes	Some concerns Un-blinded	Low risk Appropriate management of minimal loss to follow up	Low risk Blinded adjudication of clinical events	Low risk All endpoints on CT.gov reported	**High** **An appropriately conducted open-label trial**
PAUSE SCD	Some concerns 25 patients prior to 10/12/16 table randomisation, then central electronic randomisation for all subsequent patients	Some concerns Un-blinded	Low risk Appropriate management of minimal loss to follow up	Some concerns Not stated	Low risk All endpoints on CT.gov reported	**Intermediate** **An overall well conducted open-label trial but initial randomisation and allocation were less robust**

Table S3. Details of discrepancies between reported event counts and events extracted from Kaplan-Meier curves

Trial	Event counts reported in manuscript tables	Event counts obtained by digitisation of Kaplan-Meier curves	Event counts obtained by visually inspecting steps in Kaplan-Meier curves
VANISH	**Ablation – 36** **Control – 35**	**Ablation – 33** **Control – 31**	**Ablation – 33** **Control – 31**
SMASH VT	**Control – 11**	**Control – 9**	**Control – 9**

Section 3 – Supplementary figures for further analyses on the primary endpoint of all-cause mortality using reconstructed individual patient data

Figure S1. Effect of VT ablation on mortality over 48 months of follow-up
Kaplan-Meier plot for the primary analysis of all-cause mortality at 48 months using reconstructed individual patient data.

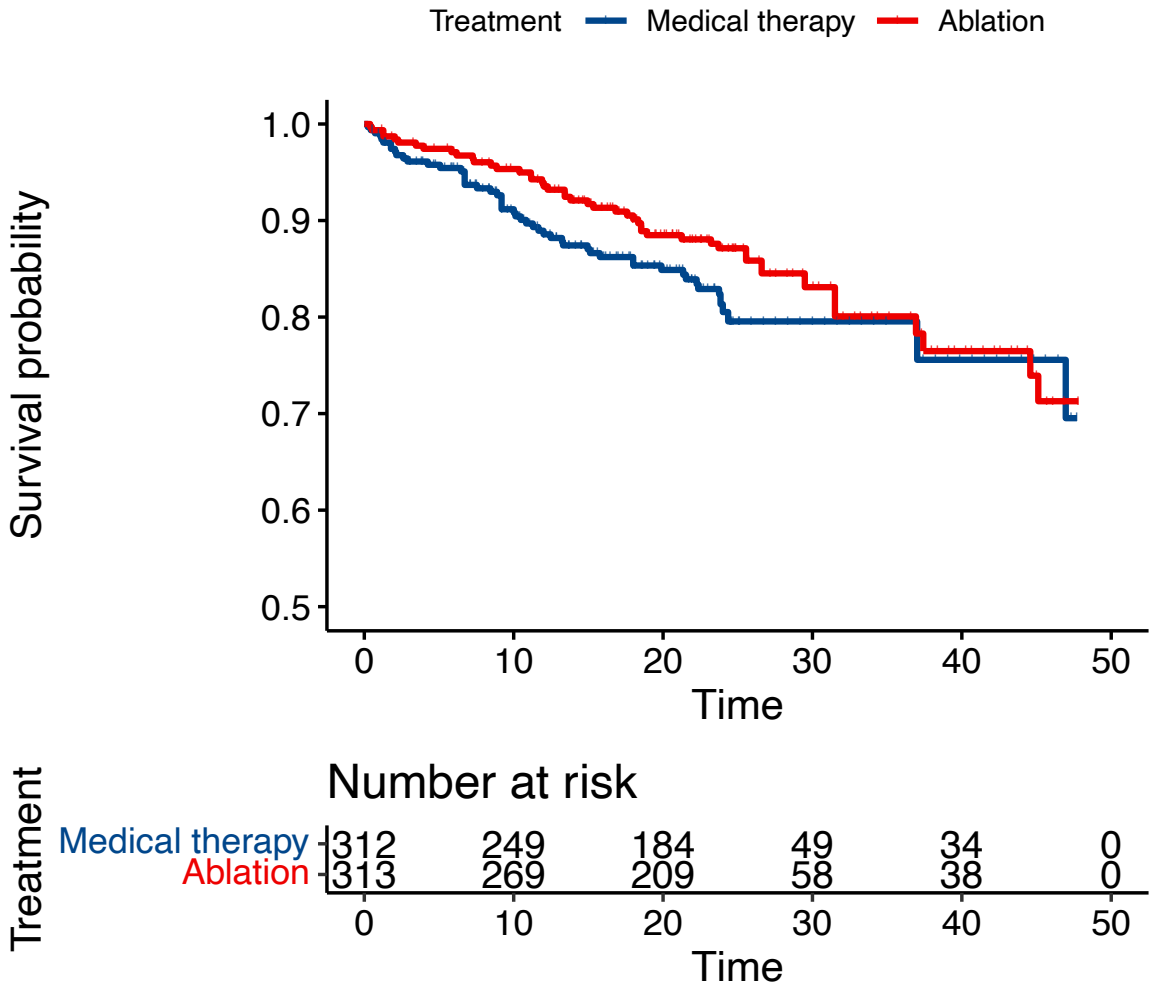


Figure S2 – Effect of VT ablation on mortality at 24 months
Forest plot for all-cause mortality using trial-level data including the trials that published Kaplan-Meier plots to allow comparison with the reconstructed individual patient data results.

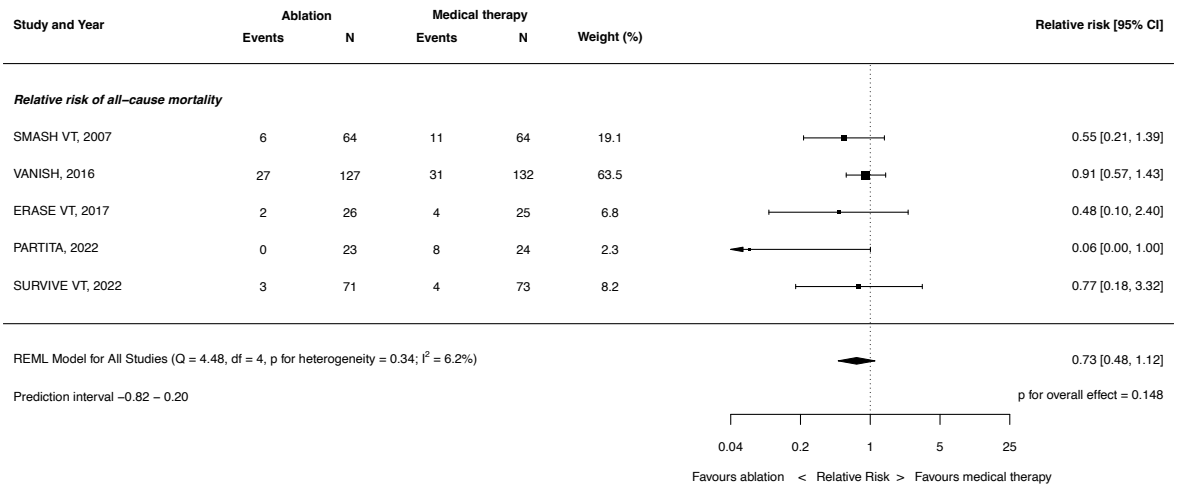
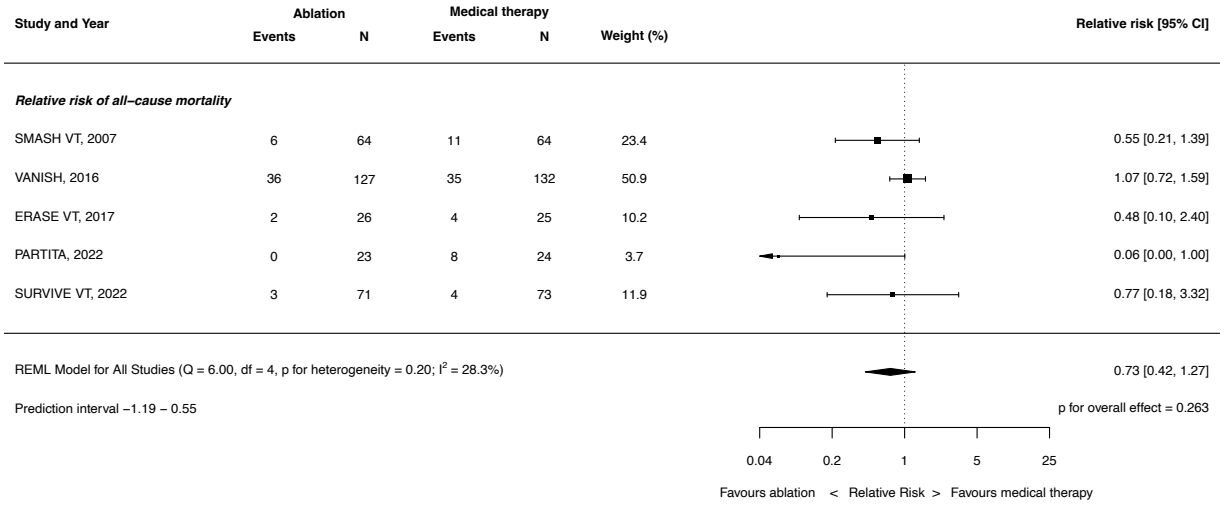


Figure S3. Effect of VT ablation on mortality at 48 months
Forest plot for all-cause mortality using trial-level data including the trials that published Kaplan-Meier plots to allow comparison with the reconstructed individual patient data results.



Section 4 – Supplementary figures for subgroup analyses examining trials that used substrate modification alone and those that used substrate modification and VT mapping

Figure S4. Effect of VT ablation on mortality

Forest plots for all-cause mortality for trials that used substrate modification alone

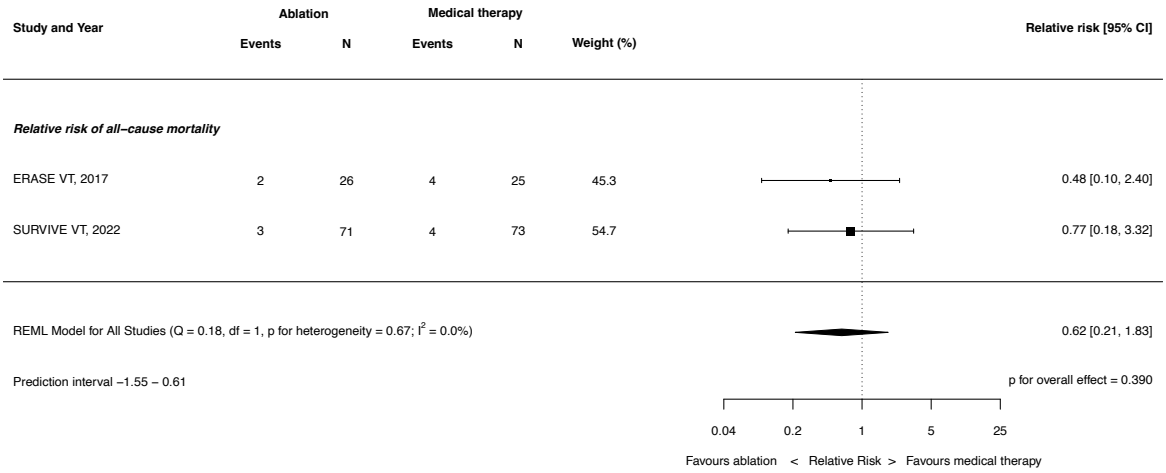


Figure S5 Effect of VT ablation on VT recurrence

Forest plots for VT recurrence for trials that used substrate modification alone

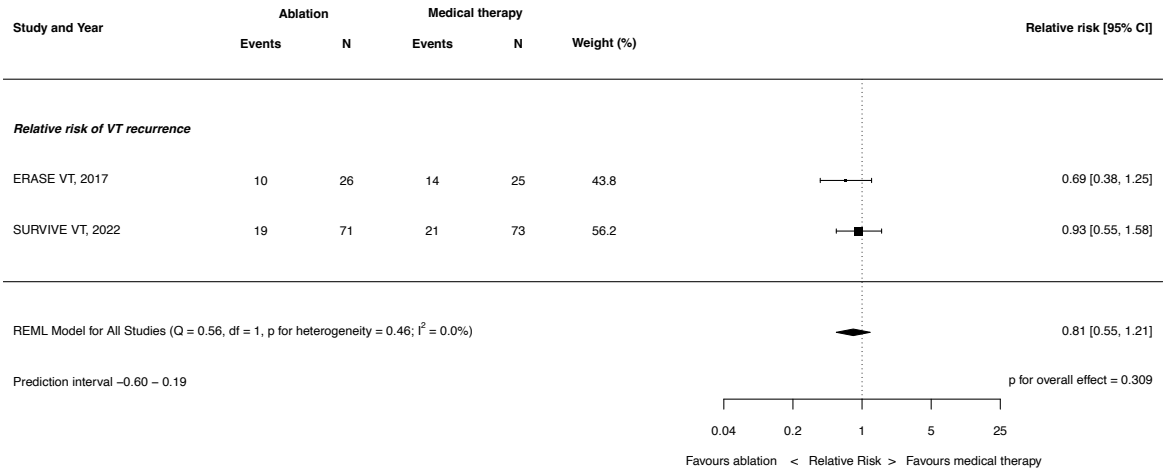


Figure S6 Effect of VT ablation on mortality

Forest plots for all-cause mortality for trials that used substrate modification and VT mapping

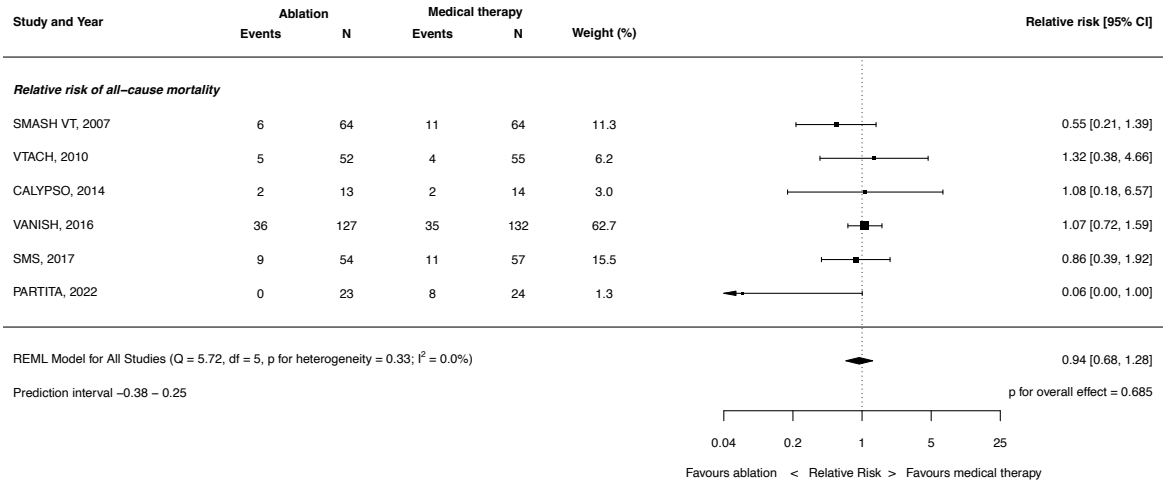


Figure S7 Effect of VT ablation on VT recurrence

Forest plots for VT recurrence for trials that used substrate modification and VT mapping

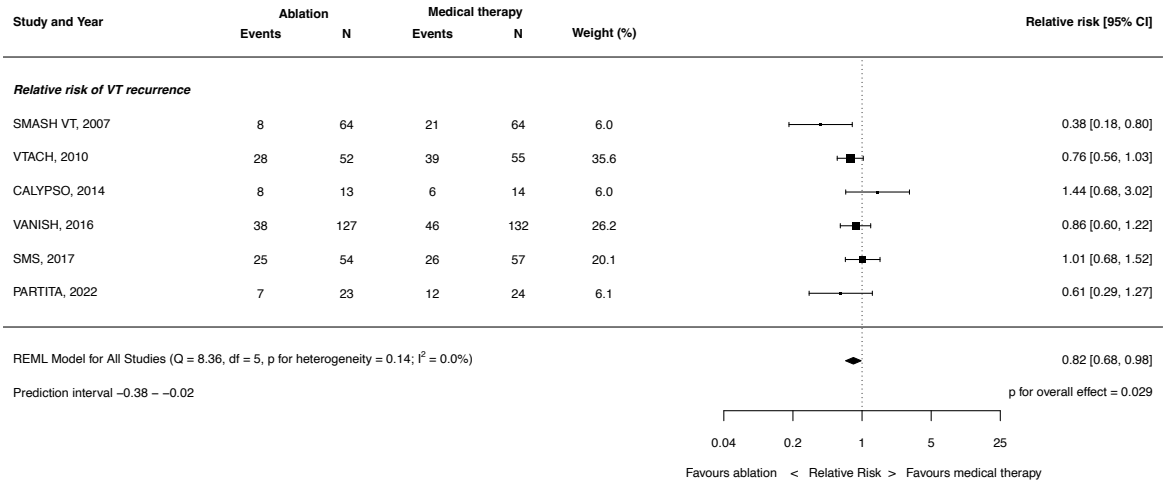


Figure S8 Effect of VT ablation on ICD shocks

Forest plots for ICD shocks for trials that used substrate modification and VT mapping

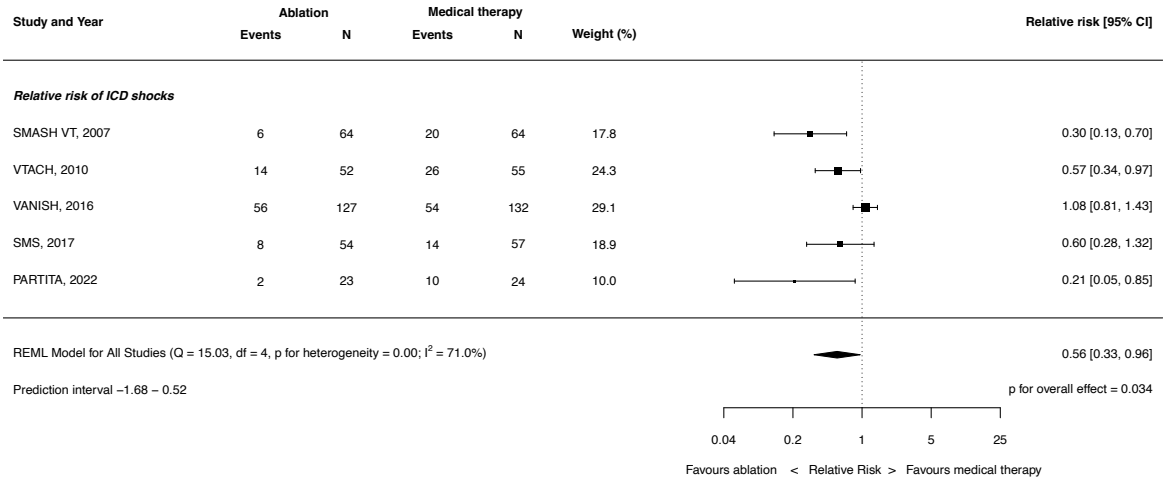
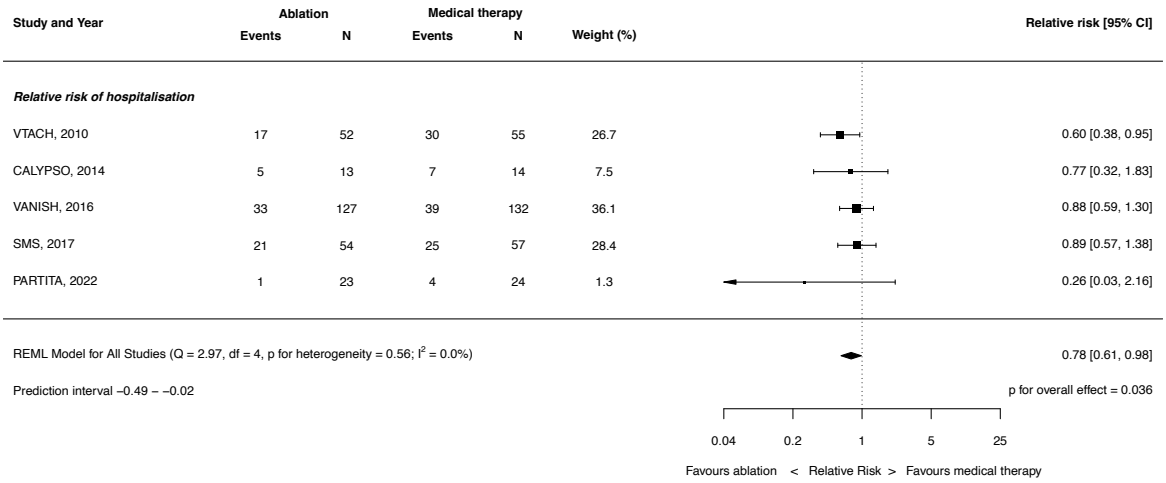


Figure S9 Effect of VT ablation on all-cause hospitalisation

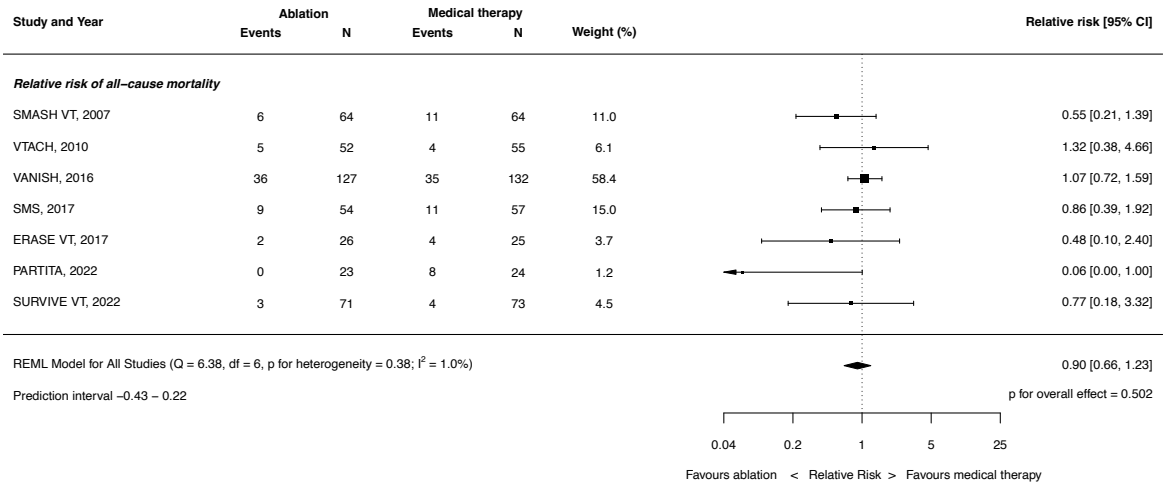
Forest plots for all-cause hospitalisation for trials that used substrate modification and VT mapping

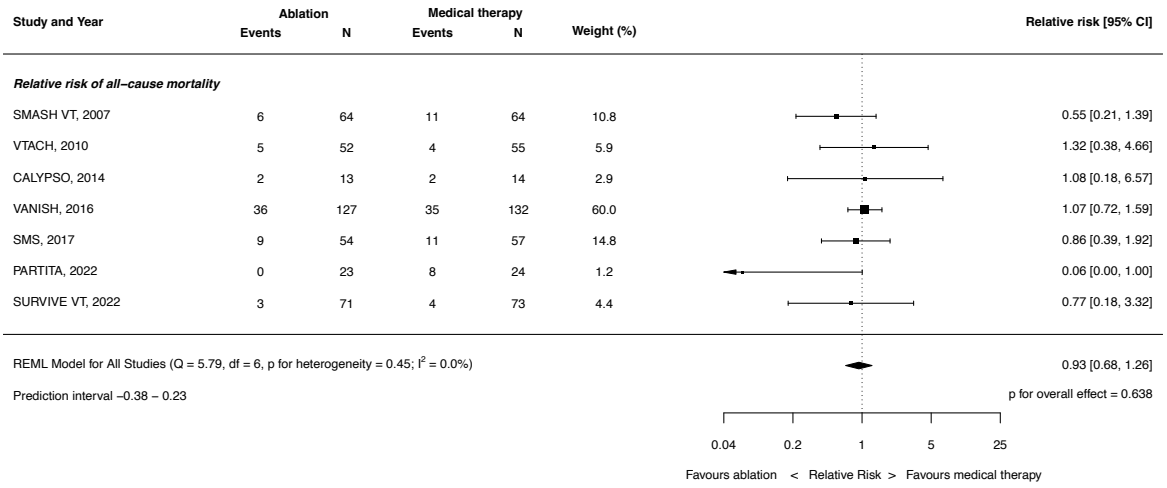


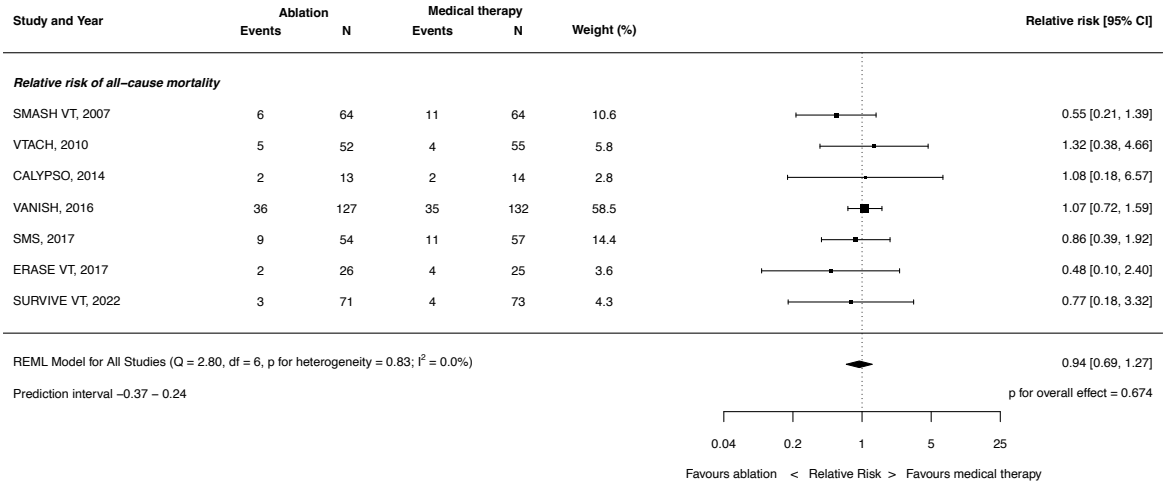
Section 5 – Supplementary figures for jackknife analyses with sequential removal of trials

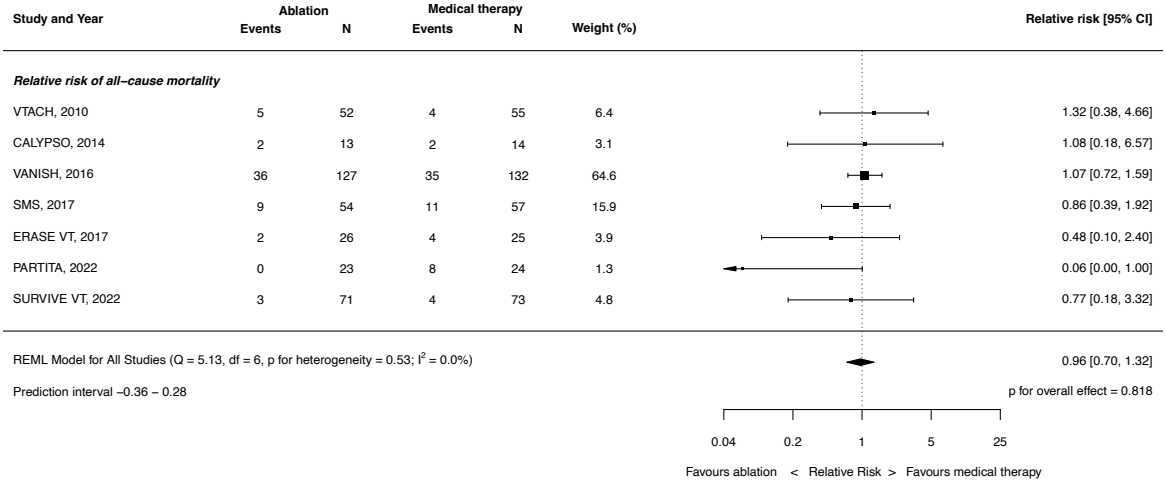
Figure S10. Effect of VT ablation on mortality

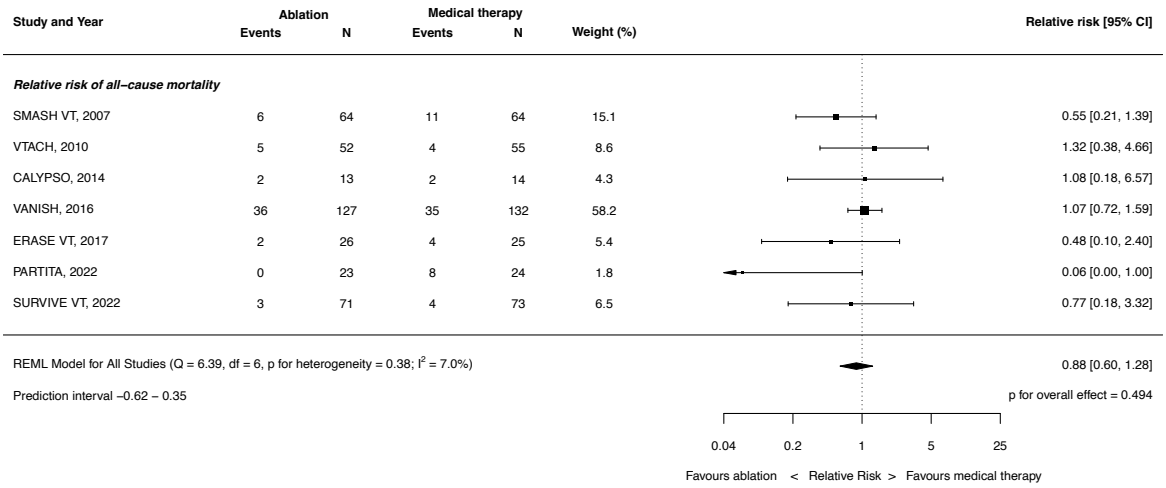
Forest plots for all-cause mortality using trial-level data with sequential removal of trials in the following order: CALYPSO, ERASE-VT, PARTITA, SMASH-VT, SMS, SURVIVE-VT, VANISH, VTACH

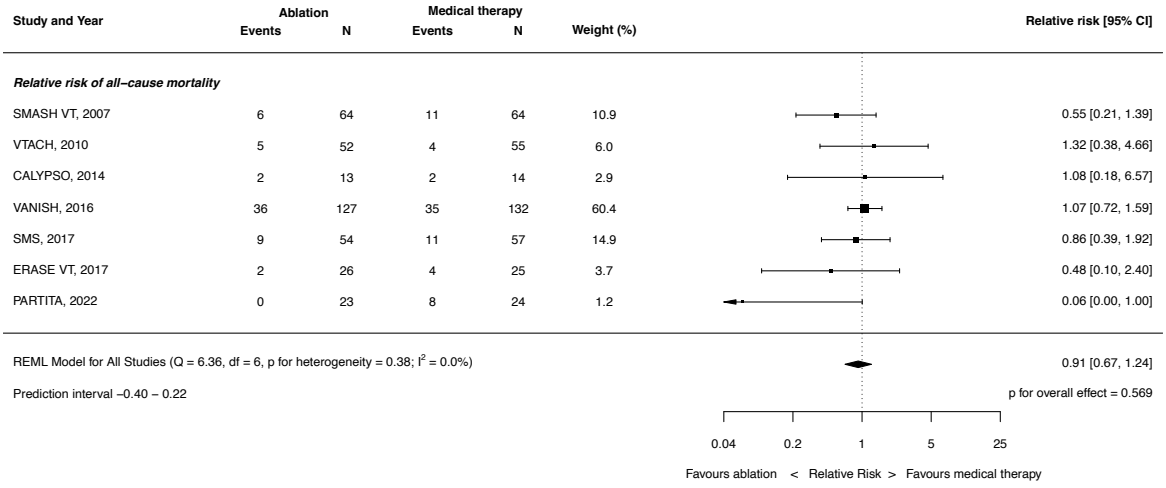


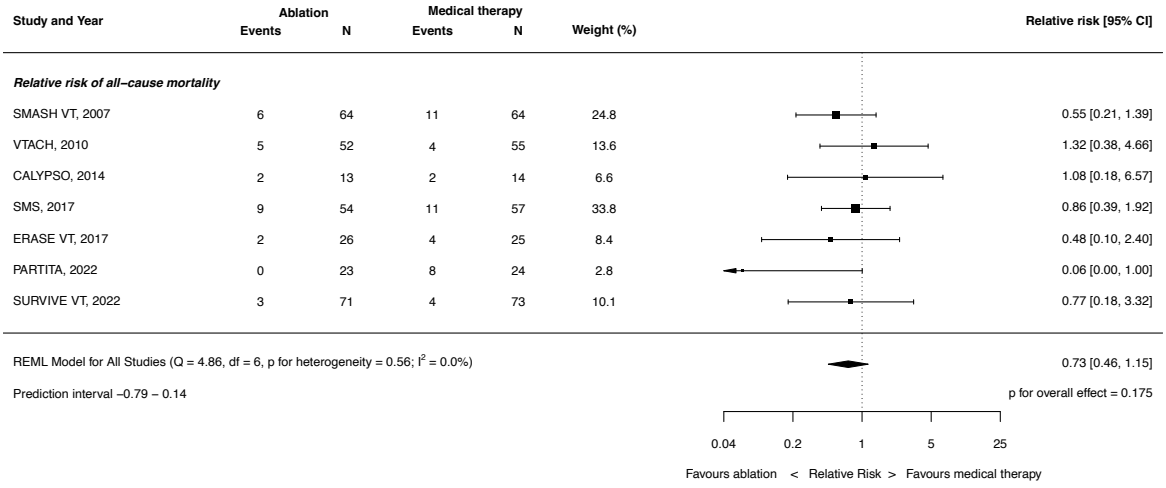



Study and Year
Ablation
Events
N
Medical therapy
Events
N
Weight (%)
Relative risk [95% CI]
Relative risk of all–cause mortality
SMASH VT, 2007 6 64 11 64 10.6 0.55 [0.21, 1.39]
VTACH, 2010 5 52 4 55 5.8 1.32 [0.38, 4.66]
CALYPSO, 2014 2 13 2 14 2.8 1.08 [0.18, 6.57]
VANISH, 2016 36 127 35 132 58.5 1.07 [0.72, 1.59]
SMS, 2017 9 54 11 57 14.4 0.86 [0.39, 1.92]
ERASE VT, 2017 2 26 4 25 3.6 0.48 [0.10, 2.40]
SURVIVE VT, 2022 3 71 4 73 4.3 0.77 [0.18, 3.32]
REML Model for All Studies (Q = 2.80, df = 6, p for heterogeneity = 0.83; I² = 0.0%) 0.94 [0.69, 1.27]
Prediction interval –0.37 – 0.24
p for overall effect = 0.674
0.04
0.2
1
5
25
Favours ablation < Relative Risk > Favours medical therapy


Study and Year
Ablation
Events
N
Medical therapy
Events
N
Weight (%)
Relative risk [95% CI]
Relative risk of all–cause mortality
VTACH, 2010 5 52 4 55 6.4 1.32 [0.38, 4.66]
CALYPSO, 2014 2 13 2 14 3.1 1.08 [0.18, 6.57]
VANISH, 2016 36 127 35 132 64.6 1.07 [0.72, 1.59]
SMS, 2017 9 54 11 57 15.9 0.86 [0.39, 1.92]
ERASE VT, 2017 2 26 4 25 3.9 0.48 [0.10, 2.40]
PARTITA, 2022 0 23 8 24 1.3 0.06 [0.00, 1.00]
SURVIVE VT, 2022 3 71 4 73 4.8 0.77 [0.18, 3.32]
REML Model for All Studies (Q = 5.13, df = 6, p for heterogeneity = 0.53; I² = 0.0%) 0.96 [0.70, 1.32]
Prediction interval –0.36 – 0.28
p for overall effect = 0.818
0.04
0.2
1
5
25
Favours ablation < Relative Risk > Favours medical therapy


Study and Year
Ablation
Events
N
Medical therapy
Events
N
Weight (%)
Relative risk [95% CI]
Relative risk of all–cause mortality
SMASH VT, 2007 6 64 11 64 15.1 0.55 [0.21, 1.39]
VTACH, 2010 5 52 4 55 8.6 1.32 [0.38, 4.66]
CALYPSO, 2014 2 13 2 14 4.3 1.08 [0.18, 6.57]
VANISH, 2016 36 127 35 132 58.2 1.07 [0.72, 1.59]
ERASE VT, 2017 2 26 4 25 5.4 0.48 [0.10, 2.40]
PARTITA, 2022 0 23 8 24 1.8 0.06 [0.00, 1.00]
SURVIVE VT, 2022 3 71 4 73 6.5 0.77 [0.18, 3.32]
REML Model for All Studies (Q = 6.39, df = 6, p for heterogeneity = 0.38; I² = 7.0%) 0.88 [0.60, 1.28]
Prediction interval –0.62 – 0.35
p for overall effect = 0.494
0.04
0.2
1
5
25
Favours ablation < Relative Risk > Favours medical therapy


Study and Year
Ablation
Events
N
Medical therapy
Events
N
Weight (%)
Relative risk [95% CI]
Relative risk of all–cause mortality
SMASH VT, 2007 6 64 11 64 10.9 0.55 [0.21, 1.39]
VTACH, 2010 5 52 4 55 6.0 1.32 [0.38, 4.66]
CALYPSO, 2014 2 13 2 14 2.9 1.08 [0.18, 6.57]
VANISH, 2016 36 127 35 132 60.4 1.07 [0.72, 1.59]
SMS, 2017 9 54 11 57 14.9 0.86 [0.39, 1.92]
ERASE VT, 2017 2 26 4 25 3.7 0.48 [0.10, 2.40]
PARTITA, 2022 0 23 8 24 1.2 0.06 [0.00, 1.00]
REML Model for All Studies (Q = 6.36, df = 6, p for heterogeneity = 0.38; I² = 0.0%) 0.91 [0.67, 1.24]
Prediction interval –0.40 – 0.22
p for overall effect = 0.569
0.04
0.2
1
5
25
Favours ablation < Relative Risk > Favours medical therapy


Study and Year
Ablation
Events
N
Medical therapy
Events
N
Weight (%)
Relative risk [95% CI]
Relative risk of all–cause mortality
SMASH VT, 2007 6 64 11 64 24.8 0.55 [0.21, 1.39]
VTACH, 2010 5 52 4 55 13.6 1.32 [0.38, 4.66]
CALYPSO, 2014 2 13 2 14 6.6 1.08 [0.18, 6.57]
SMS, 2017 9 54 11 57 33.8 0.86 [0.39, 1.92]
ERASE VT, 2017 2 26 4 25 8.4 0.48 [0.10, 2.40]
PARTITA, 2022 0 23 8 24 2.8 0.06 [0.00, 1.00]
SURVIVE VT, 2022 3 71 4 73 10.1 0.77 [0.18, 3.32]
REML Model for All Studies (Q = 4.86, df = 6, p for heterogeneity = 0.56; I² = 0.0%) 0.73 [0.46, 1.15]
Prediction interval –0.79 – 0.14
p for overall effect = 0.175
0.04
0.2
1
5
25
Favours ablation < Relative Risk > Favours medical therapy

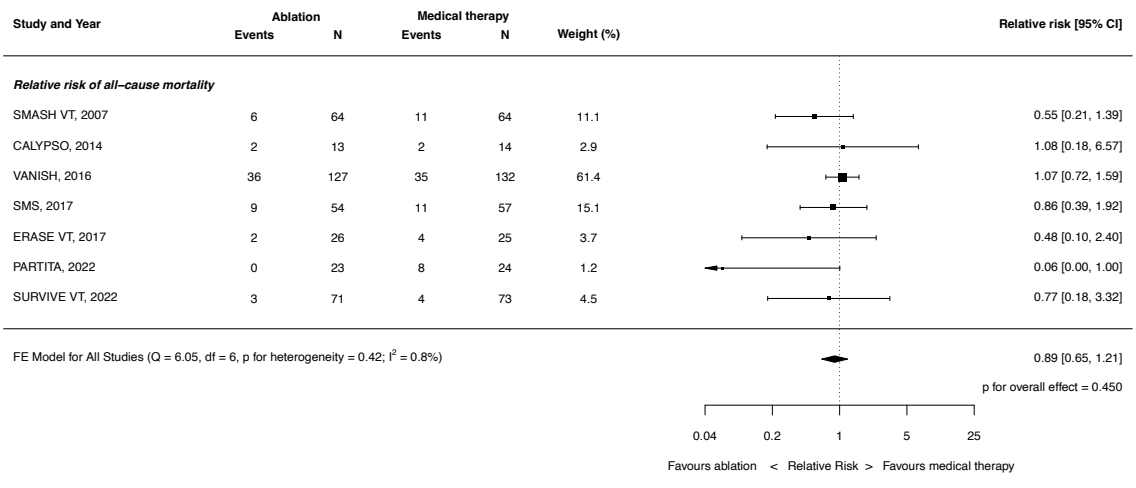
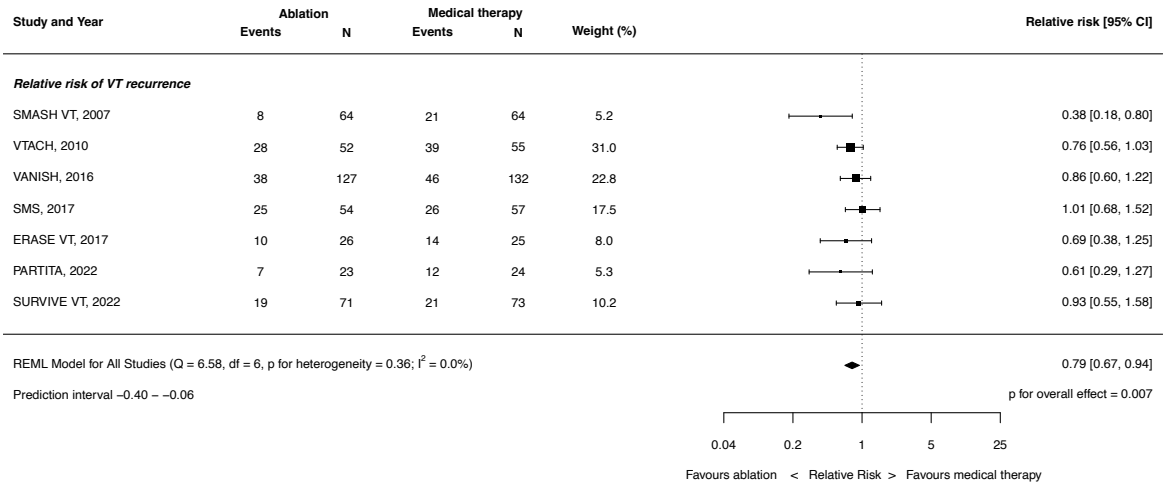
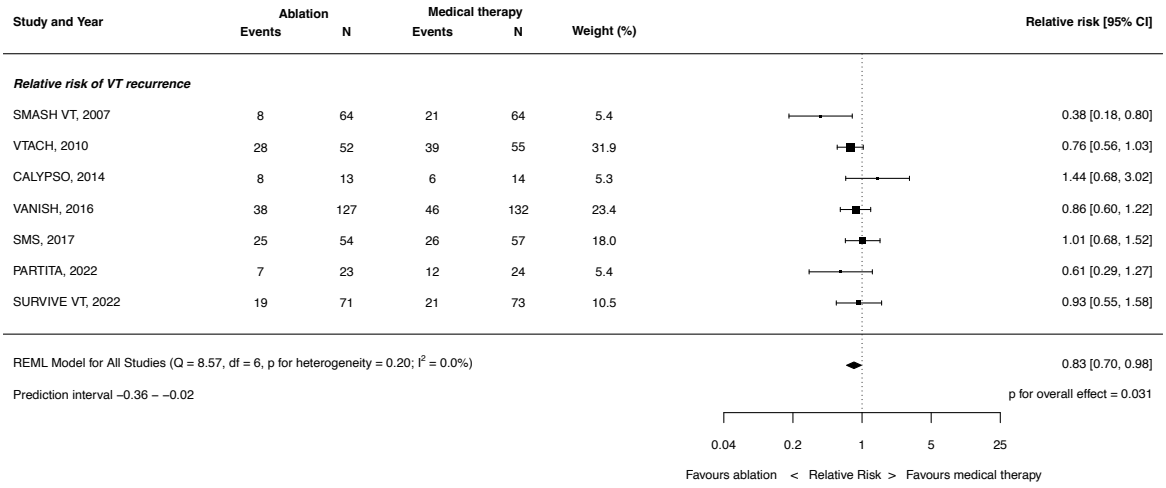
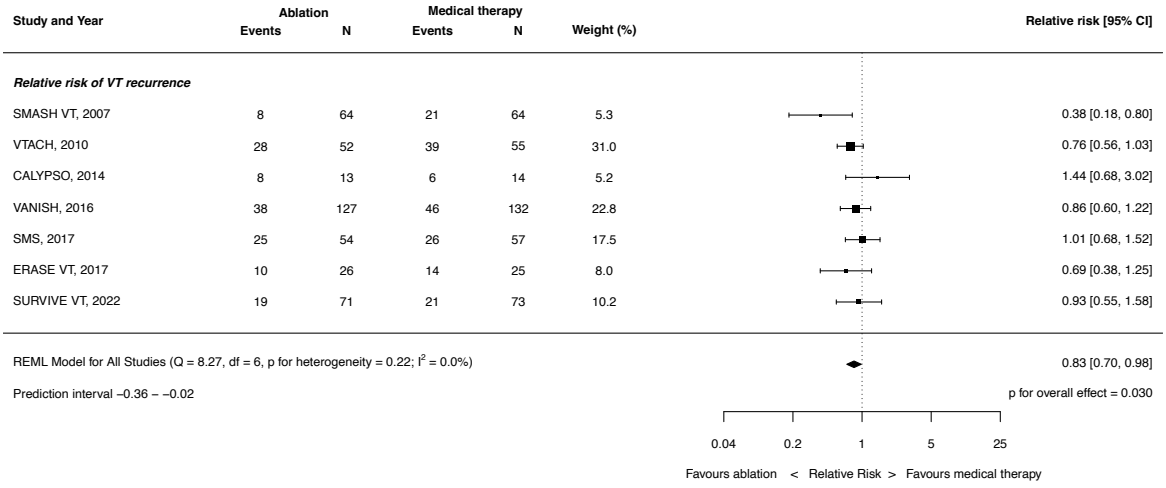

Study and Year
Ablation
Events
N
Medical therapy
Events
N
Weight (%)
Relative risk [95% CI]
Relative risk of all–cause mortality
SMASH VT, 2007 6 64 11 64 11.1 0.55 [0.21, 1.39]
CALYPSO, 2014 2 13 2 14 2.9 1.08 [0.18, 6.57]
VANISH, 2016 36 127 35 132 61.4 1.07 [0.72, 1.59]
SMS, 2017 9 54 11 57 15.1 0.86 [0.39, 1.92]
ERASE VT, 2017 2 26 4 25 3.7 0.48 [0.10, 2.40]
PARTITA, 2022 0 23 8 24 1.2 0.06 [0.00, 1.00]
SURVIVE VT, 2022 3 71 4 73 4.5 0.77 [0.18, 3.32]
FE Model for All Studies (Q = 6.05, df = 6, p for heterogeneity = 0.42; I² = 0.8%) 0.89 [0.65, 1.21]
p for overall effect = 0.450
0.04
0.2
1
5
25
Favours ablation < Relative Risk > Favours medical therapy

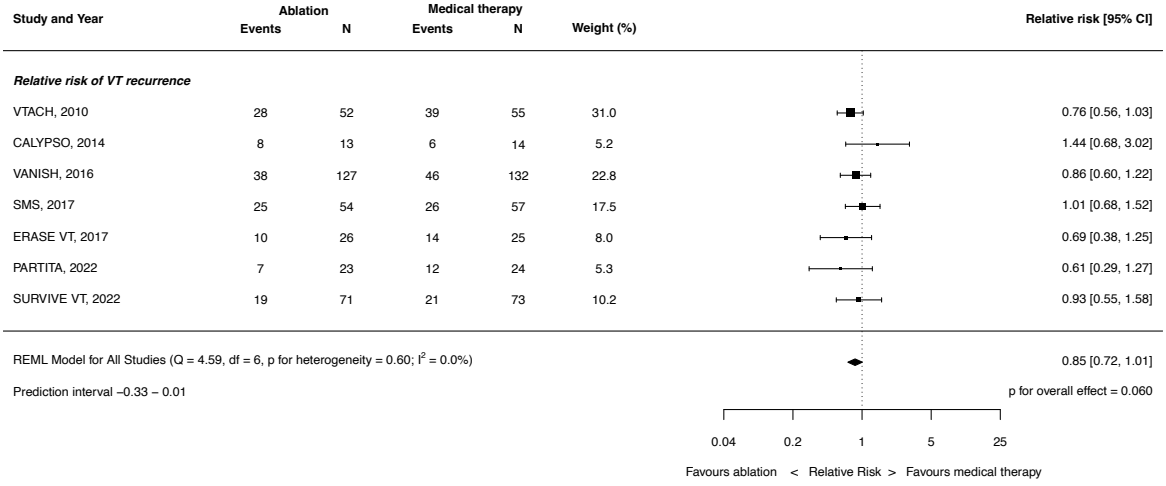
Figure S11. Effect of VT ablation on VT recurrence

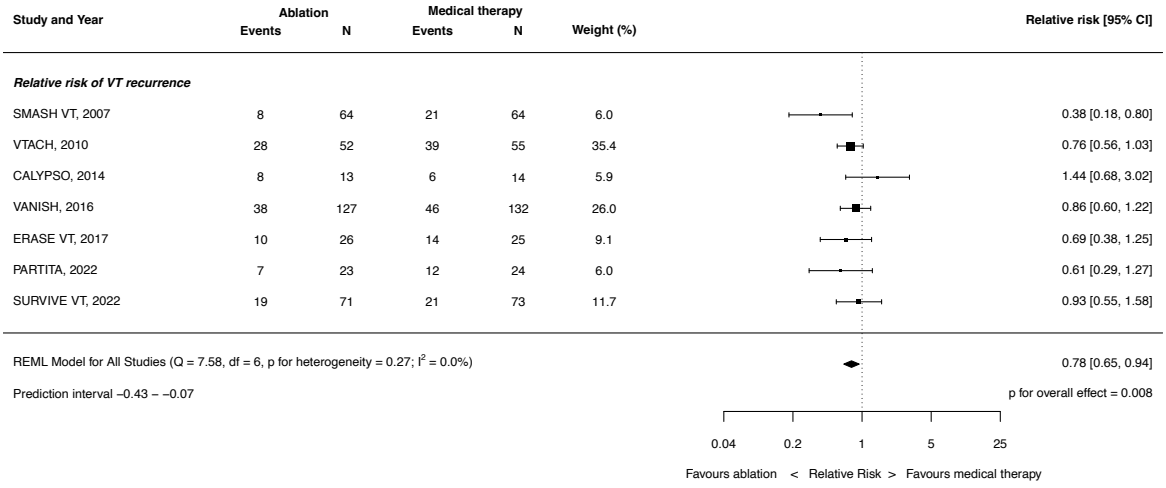
Forest plots for VT recurrence using trial-level data with sequential removal of trials in the following order: CALYPSO, ERASE-VT, PARTITA, SMASH-VT, SMS, SURVIVE-VT, VANISH, VTACH

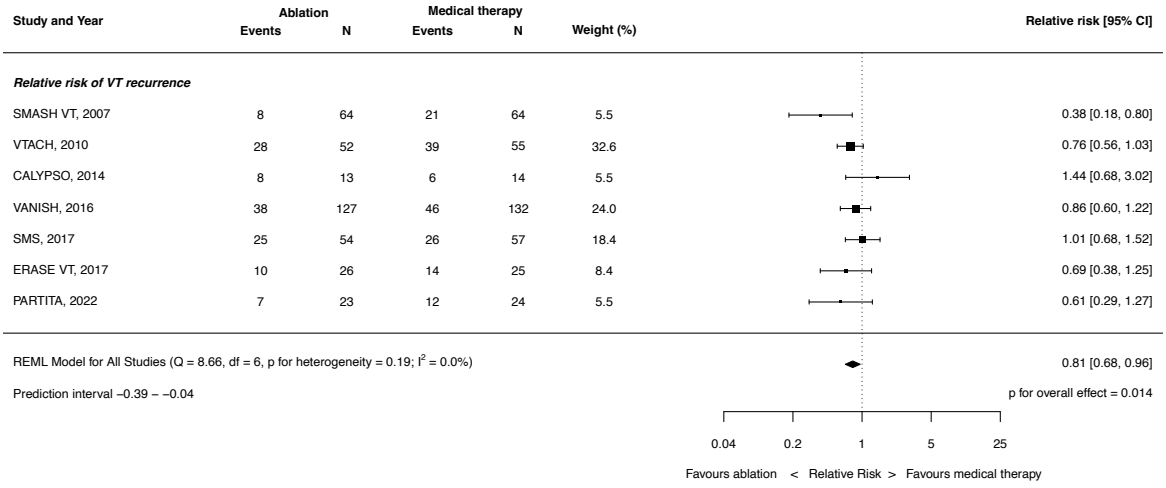


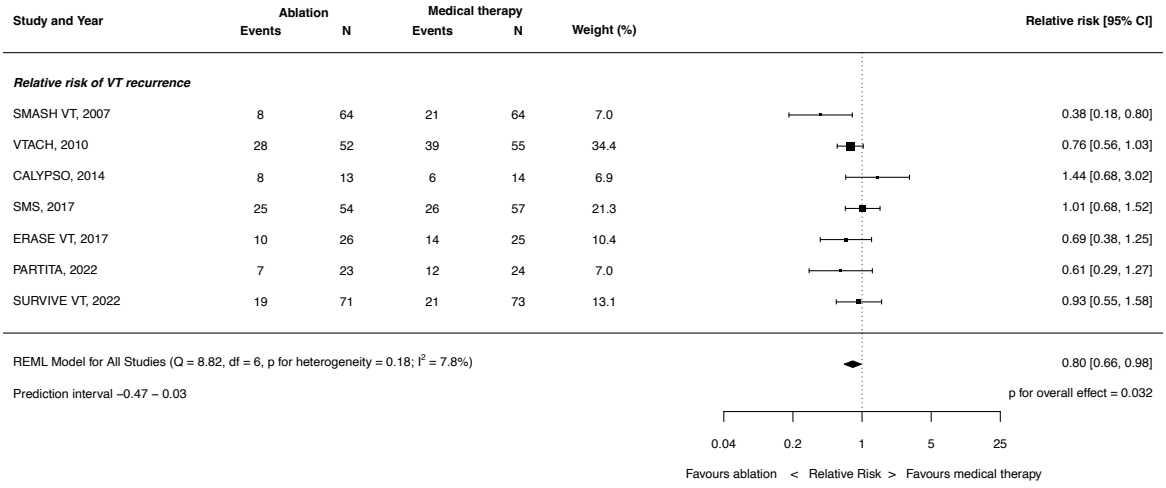



Study and Year
Ablation
Events
N
Medical therapy
Events
N
Weight (%)
Relative risk [95% CI]
Relative risk of VT recurrence
SMASH VT, 2007 8 64 21 64 5.3 0.38 [0.18, 0.80]
VTACH, 2010 28 52 39 55 31.0 0.76 [0.56, 1.03]
CALYPSO, 2014 8 13 6 14 5.2 1.44 [0.68, 3.02]
VANISH, 2016 38 127 46 132 22.8 0.86 [0.60, 1.22]
SMS, 2017 25 54 26 57 17.5 1.01 [0.68, 1.52]
ERASE VT, 2017 10 26 14 25 8.0 0.69 [0.38, 1.25]
SURVIVE VT, 2022 19 71 21 73 10.2 0.93 [0.55, 1.58]
REML Model for All Studies (Q = 8.27, df = 6, p for heterogeneity = 0.22; I² = 0.0%) 0.83 [0.70, 0.98]
Prediction interval –0.36 – –0.02
p for overall effect = 0.030
0.04
0.2
1
5
25
Favours ablation < Relative Risk > Favours medical therapy


Study and Year
Ablation
Events
N
Medical therapy
Events
N
Weight (%)
Relative risk [95% CI]
Relative risk of VT recurrence
VTACH, 2010 28 52 39 55 31.0 0.76 [0.56, 1.03]
CALYPSO, 2014 8 13 6 14 5.2 1.44 [0.68, 3.02]
VANISH, 2016 38 127 46 132 22.8 0.86 [0.60, 1.22]
SMS, 2017 25 54 26 57 17.5 1.01 [0.68, 1.52]
ERASE VT, 2017 10 26 14 25 8.0 0.69 [0.38, 1.25]
PARTITA, 2022 7 23 12 24 5.3 0.61 [0.29, 1.27]
SURVIVE VT, 2022 19 71 21 73 10.2 0.93 [0.55, 1.58]
REML Model for All Studies (Q = 4.59, df = 6, p for heterogeneity = 0.60; I² = 0.0%) 0.85 [0.72, 1.01]
Prediction interval –0.33 – 0.01
p for overall effect = 0.060
0.04
0.2
1
5
25
Favours ablation < Relative Risk > Favours medical therapy


Study and Year
Ablation
Events
N
Medical therapy
Events
N
Weight (%)
Relative risk [95% CI]
Relative risk of VT recurrence
SMASH VT, 2007 8 64 21 64 6.0 0.38 [0.18, 0.80]
VTACH, 2010 28 52 39 55 35.4 0.76 [0.56, 1.03]
CALYPSO, 2014 8 13 6 14 5.9 1.44 [0.68, 3.02]
VANISH, 2016 38 127 46 132 26.0 0.86 [0.60, 1.22]
ERASE VT, 2017 10 26 14 25 9.1 0.69 [0.38, 1.25]
PARTITA, 2022 7 23 12 24 6.0 0.61 [0.29, 1.27]
SURVIVE VT, 2022 19 71 21 73 11.7 0.93 [0.55, 1.58]
REML Model for All Studies (Q = 7.58, df = 6, p for heterogeneity = 0.27; I² = 0.0%) 0.78 [0.65, 0.94]
Prediction interval –0.43 – –0.07
p for overall effect = 0.008
0.04
0.2
1
5
25
Favours ablation < Relative Risk > Favours medical therapy


Study and Year
Ablation
Events
N
Medical therapy
Events
N
Weight (%)
Relative risk [95% CI]
Relative risk of VT recurrence
SMASH VT, 2007 8 64 21 64 5.5 0.38 [0.18, 0.80]
VTACH, 2010 28 52 39 55 32.6 0.76 [0.56, 1.03]
CALYPSO, 2014 8 13 6 14 5.5 1.44 [0.68, 3.02]
VANISH, 2016 38 127 46 132 24.0 0.86 [0.60, 1.22]
SMS, 2017 25 54 26 57 18.4 1.01 [0.68, 1.52]
ERASE VT, 2017 10 26 14 25 8.4 0.69 [0.38, 1.25]
PARTITA, 2022 7 23 12 24 5.5 0.61 [0.29, 1.27]
REML Model for All Studies (Q = 8.66, df = 6, p for heterogeneity = 0.19; I² = 0.0%) 0.81 [0.68, 0.96]
Prediction interval –0.39 – –0.04
p for overall effect = 0.014
0.04
0.2
1
5
25
Favours ablation < Relative Risk > Favours medical therapy


Study and Year
Ablation
Events
N
Medical therapy
Events
N
Weight (%)
Relative risk [95% CI]
Relative risk of VT recurrence
SMASH VT, 2007 8 64 21 64 7.0 0.38 [0.18, 0.80]
VTACH, 2010 28 52 39 55 34.4 0.76 [0.56, 1.03]
CALYPSO, 2014 8 13 6 14 6.9 1.44 [0.68, 3.02]
SMS, 2017 25 54 26 57 21.3 1.01 [0.68, 1.52]
ERASE VT, 2017 10 26 14 25 10.4 0.69 [0.38, 1.25]
PARTITA, 2022 7 23 12 24 7.0 0.61 [0.29, 1.27]
SURVIVE VT, 2022 19 71 21 73 13.1 0.93 [0.55, 1.58]
REML Model for All Studies (Q = 8.82, df = 6, p for heterogeneity = 0.18; I² = 7.8%) 0.80 [0.66, 0.98]
Prediction interval –0.47 – 0.03
p for overall effect = 0.032
0.04
0.2
1
5
25
Favours ablation < Relative Risk > Favours medical therapy

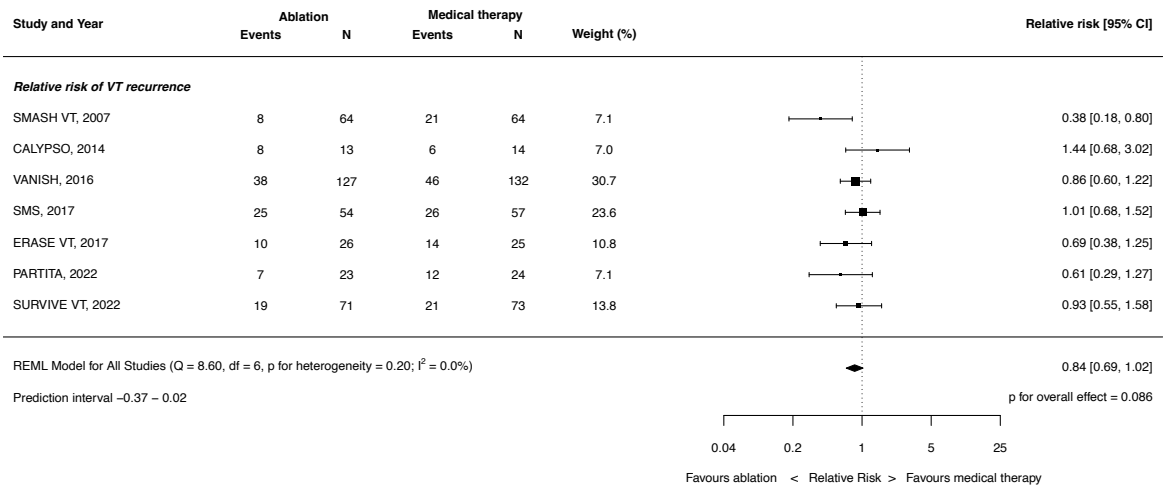
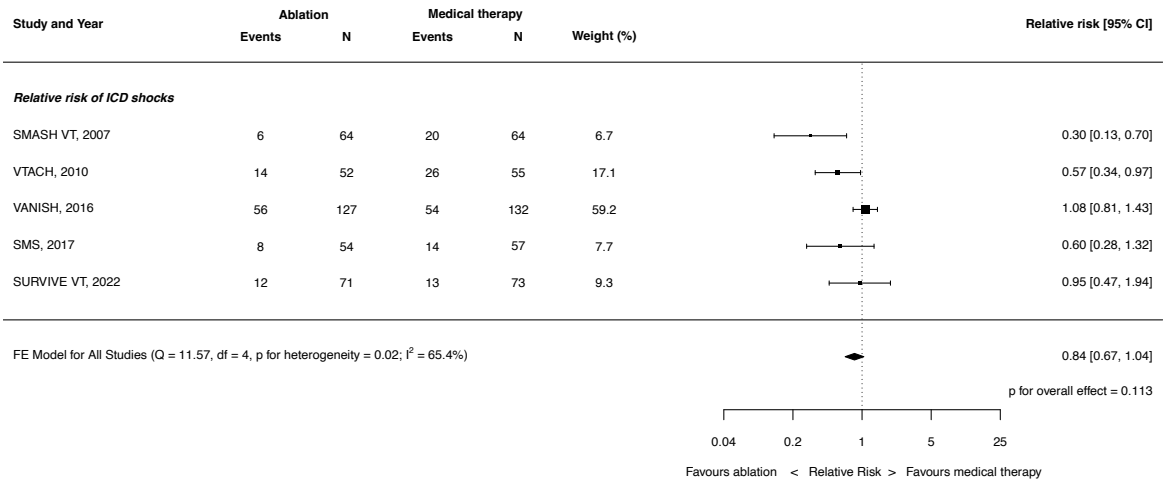
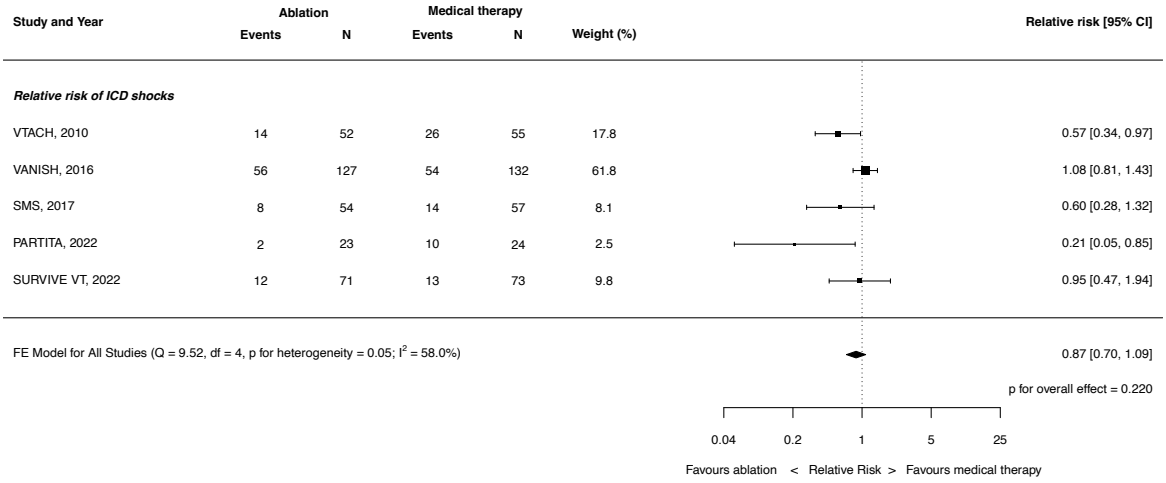
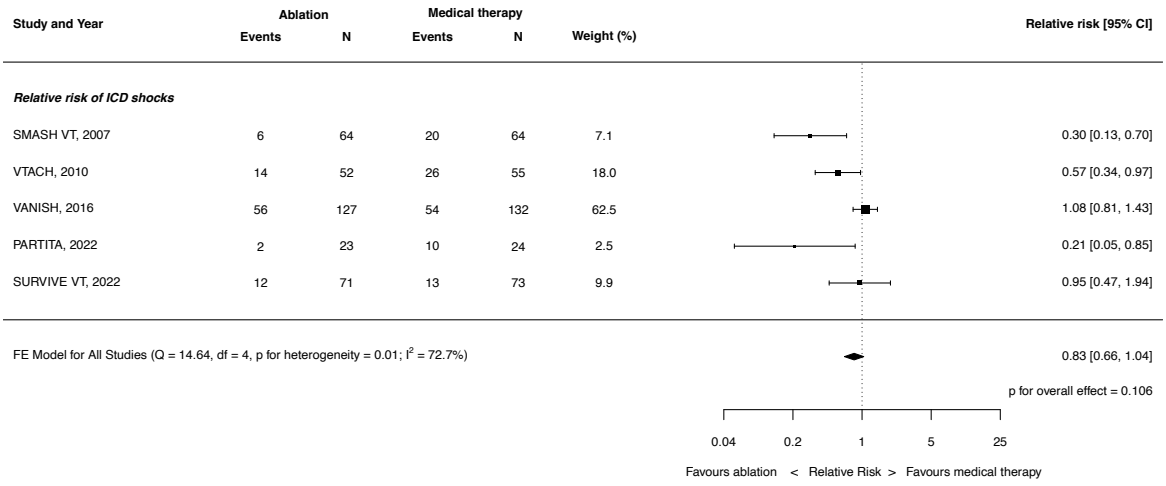

Study and Year
Ablation
Events
N
Medical therapy
Events
N
Weight (%)
Relative risk [95% CI]
Relative risk of VT recurrence
SMASH VT, 2007 8 64 21 64 7.1 0.38 [0.18, 0.80]
CALYPSO, 2014 8 13 6 14 7.0 1.44 [0.68, 3.02]
VANISH, 2016 38 127 46 132 30.7 0.86 [0.60, 1.22]
SMS, 2017 25 54 26 57 23.6 1.01 [0.68, 1.52]
ERASE VT, 2017 10 26 14 25 10.8 0.69 [0.38, 1.25]
PARTITA, 2022 7 23 12 24 7.1 0.61 [0.29, 1.27]
SURVIVE VT, 2022 19 71 21 73 13.8 0.93 [0.55, 1.58]
REML Model for All Studies (Q = 8.60, df = 6, p for heterogeneity = 0.20; I² = 0.0%) 0.84 [0.69, 1.02]
Prediction interval –0.37 – 0.02
p for overall effect = 0.086
0.04
0.2
1
5
25
Favours ablation < Relative Risk > Favours medical therapy

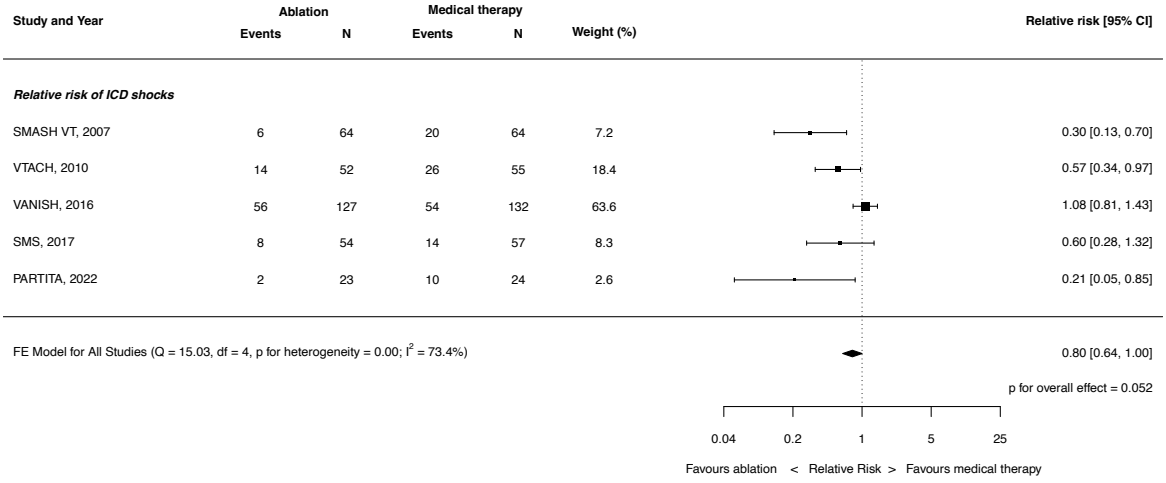
Figure S12. Effect of VT ablation on ICD shocks

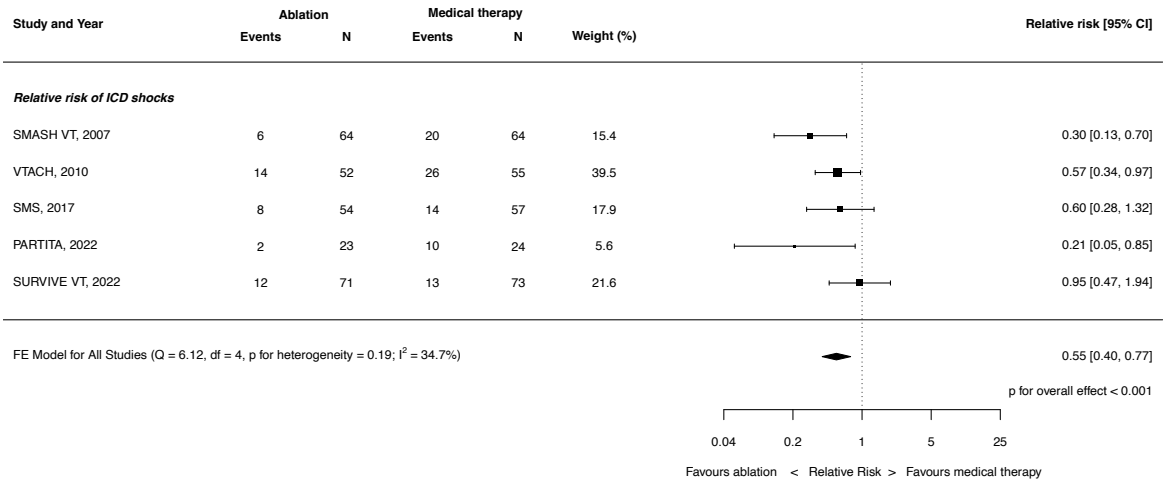
Forest plots for ICD shocks using trial-level data with sequential removal of trials in the following order: PARTITA, SMASH-VT, SMS, SURVIVE-VT, VANISH, VTACH






Study and Year
Ablation
Events
N
Medical therapy
Events
N
Weight (%)
Relative risk [95% CI]
Relative risk of ICD shocks
SMASH VT, 2007 6 64 20 64 7.1 0.30 [0.13, 0.70]
VTACH, 2010 14 52 26 55 18.0 0.57 [0.34, 0.97]
VANISH, 2016 56 127 54 132 62.5 1.08 [0.81, 1.43]
PARTITA, 2022 2 23 10 24 2.5 0.21 [0.05, 0.85]
SURVIVE VT, 2022 12 71 13 73 9.9 0.95 [0.47, 1.94]
FE Model for All Studies (Q = 14.64, df = 4, p for heterogeneity = 0.01; I² = 72.7%) 0.83 [0.66, 1.04]
p for overall effect = 0.106
0.04
0.2
1
5
25
Favours ablation < Relative Risk > Favours medical therapy


Study and Year
Ablation
Events
N
Medical therapy
Events
N
Weight (%)
Relative risk [95% CI]
Relative risk of ICD shocks
SMASH VT, 2007 6 64 20 64 7.2 0.30 [0.13, 0.70]
VTACH, 2010 14 52 26 55 18.4 0.57 [0.34, 0.97]
VANISH, 2016 56 127 54 132 63.6 1.08 [0.81, 1.43]
SMS, 2017 8 54 14 57 8.3 0.60 [0.28, 1.32]
PARTITA, 2022 2 23 10 24 2.6 0.21 [0.05, 0.85]
FE Model for All Studies (Q = 15.03, df = 4, p for heterogeneity = 0.00; I² = 73.4%) 0.80 [0.64, 1.00]
p for overall effect = 0.052
0.04
0.2
1
5
25
Favours ablation < Relative Risk > Favours medical therapy


Study and Year
Ablation
Events
N
Medical therapy
Events
N
Weight (%)
Relative risk [95% CI]
Relative risk of ICD shocks
SMASH VT, 2007 6 64 20 64 15.4 0.30 [0.13, 0.70]
VTACH, 2010 14 52 26 55 39.5 0.57 [0.34, 0.97]
SMS, 2017 8 54 14 57 17.9 0.60 [0.28, 1.32]
PARTITA, 2022 2 23 10 24 5.6 0.21 [0.05, 0.85]
SURVIVE VT, 2022 12 71 13 73 21.6 0.95 [0.47, 1.94]
FE Model for All Studies (Q = 6.12, df = 4, p for heterogeneity = 0.19; I² = 34.7%) 0.55 [0.40, 0.77]
p for overall effect < 0.001
0.04
0.2
1
5
25
Favours ablation < Relative Risk > Favours medical therapy

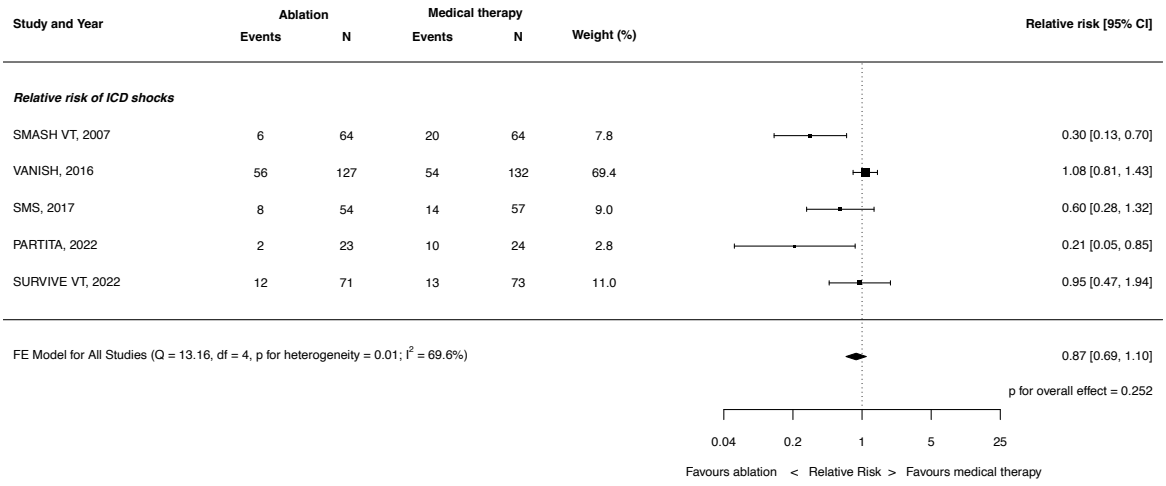
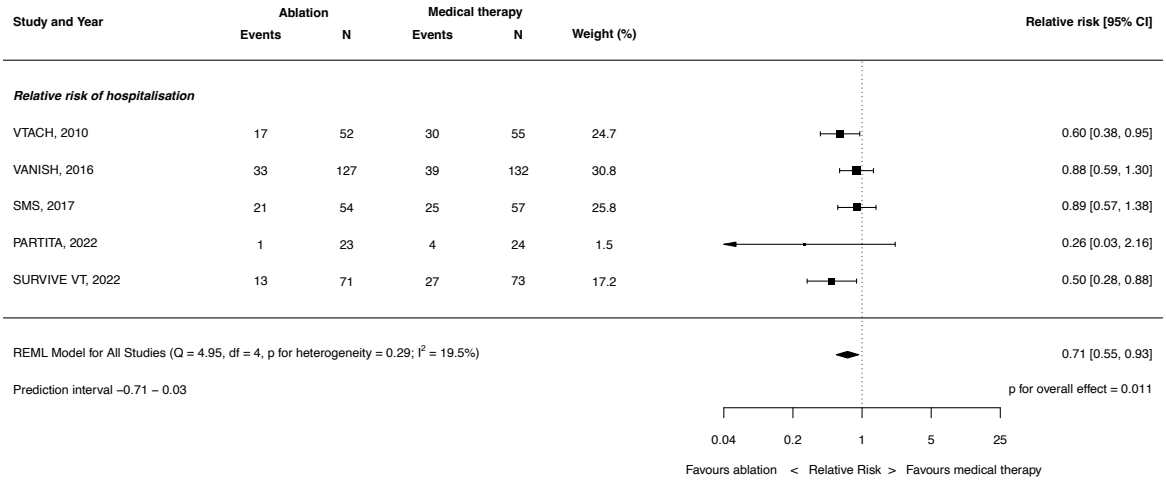
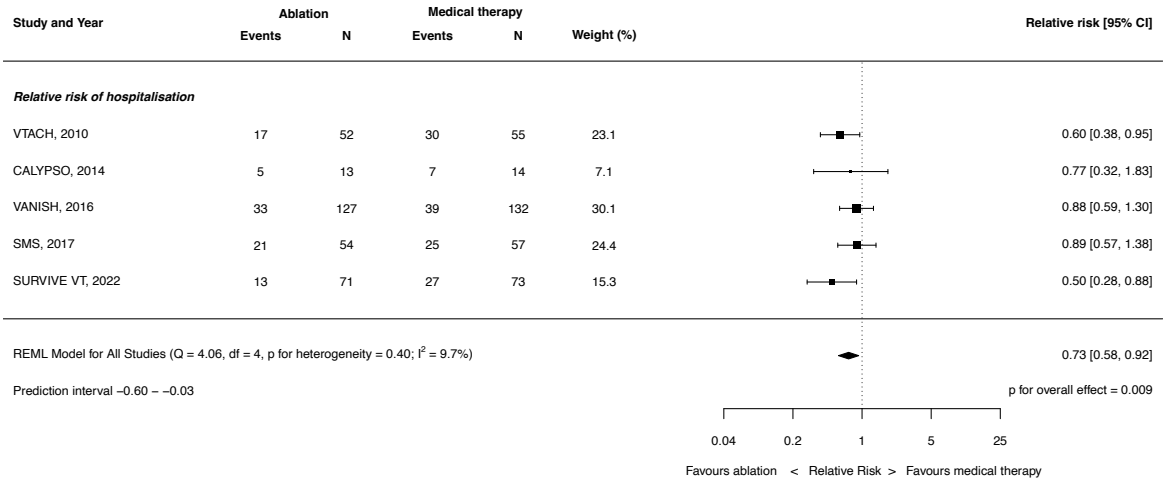
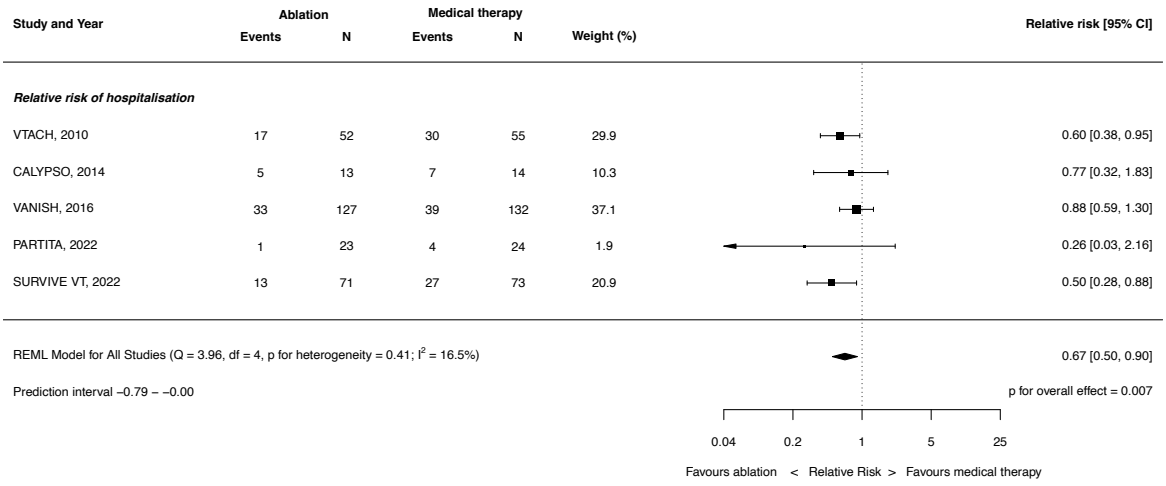

Study and Year
Ablation
Events
N
Medical therapy
Events
N
Weight (%)
Relative risk [95% CI]
Relative risk of ICD shocks
SMASH VT, 2007 6 64 20 64 7.8 0.30 [0.13, 0.70]
VANISH, 2016 56 127 54 132 69.4 1.08 [0.81, 1.43]
SMS, 2017 8 54 14 57 9.0 0.60 [0.28, 1.32]
PARTITA, 2022 2 23 10 24 2.8 0.21 [0.05, 0.85]
SURVIVE VT, 2022 12 71 13 73 11.0 0.95 [0.47, 1.94]
FE Model for All Studies (Q = 13.16, df = 4, p for heterogeneity = 0.01; I² = 69.6%) 0.87 [0.69, 1.10]
p for overall effect = 0.252
0.04
0.2
1
5
25
Favours ablation < Relative Risk > Favours medical therapy

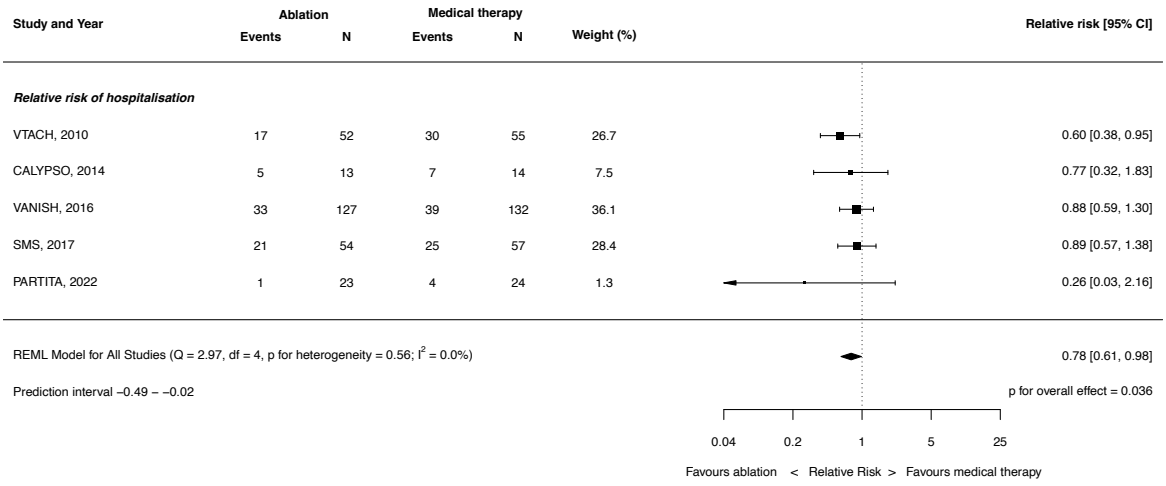
Figure S13. Effect of VT ablation on all-cause hospitalisation

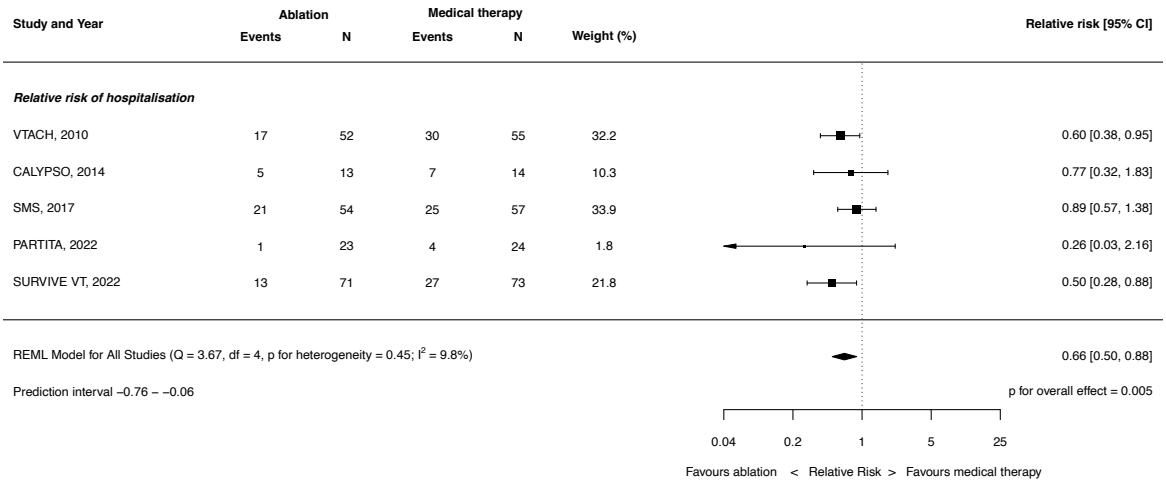
Forest plots for all-cause hospitalisation using trial-level data with sequential removal of trials in the following order: CALYPSO, PARTITA, SMS, SURVIVE-VT, VANISH, VTACH

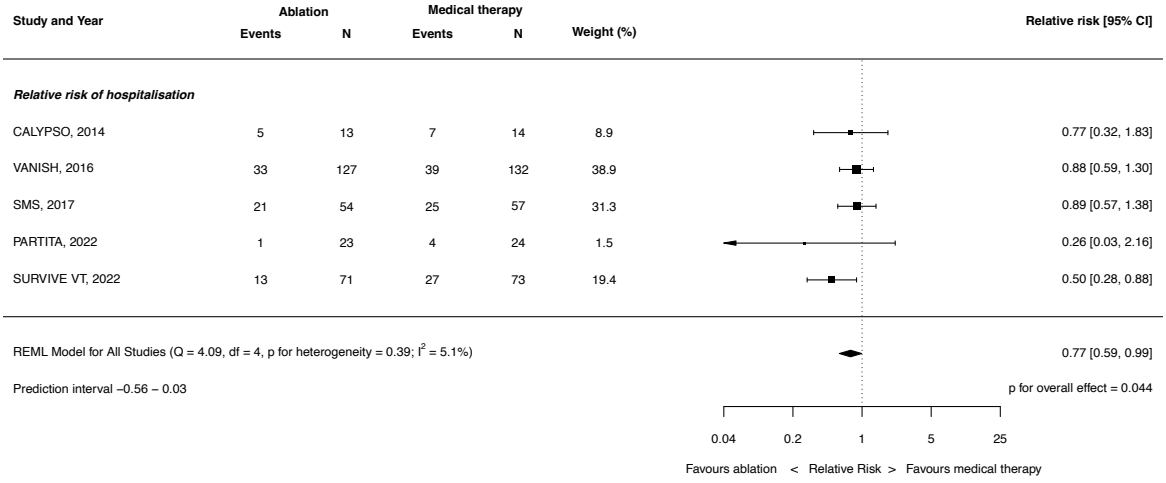





Study and Year
Ablation
Events
N
Medical therapy
Events
N
Weight (%)
Relative risk [95% CI]
Relative risk of hospitalisation
VTACH, 2010 17 52 30 55 29.9 0.60 [0.38, 0.95]
CALYPSO, 2014 5 13 7 14 10.3 0.77 [0.32, 1.83]
VANISH, 2016 33 127 39 132 37.1 0.88 [0.59, 1.30]
PARTITA, 2022 1 23 4 24 1.9 0.26 [0.03, 2.16]
SURVIVE VT, 2022 13 71 27 73 20.9 0.50 [0.28, 0.88]
REML Model for All Studies (Q = 3.96, df = 4, p for heterogeneity = 0.41; I² = 16.5%) 0.67 [0.50, 0.90]
Prediction interval –0.79 – –0.00
p for overall effect = 0.007
0.04
0.2
1
5
25
Favours ablation < Relative Risk > Favours medical therapy


Study and Year
Ablation
Events
N
Medical therapy
Events
N
Weight (%)
Relative risk [95% CI]
Relative risk of hospitalisation
VTACH, 2010 17 52 30 55 26.7 0.60 [0.38, 0.95]
CALYPSO, 2014 5 13 7 14 7.5 0.77 [0.32, 1.83]
VANISH, 2016 33 127 39 132 36.1 0.88 [0.59, 1.30]
SMS, 2017 21 54 25 57 28.4 0.89 [0.57, 1.38]
PARTITA, 2022 1 23 4 24 1.3 0.26 [0.03, 2.16]
REML Model for All Studies (Q = 2.97, df = 4, p for heterogeneity = 0.56; I² = 0.0%) 0.78 [0.61, 0.98]
Prediction interval –0.49 – –0.02
p for overall effect = 0.036
0.04
0.2
1
5
25
Favours ablation < Relative Risk > Favours medical therapy


Study and Year
Ablation
Events
N
Medical therapy
Events
N
Weight (%)
Relative risk [95% CI]
Relative risk of hospitalisation
VTACH, 2010 17 52 30 55 32.2 0.60 [0.38, 0.95]
CALYPSO, 2014 5 13 7 14 10.3 0.77 [0.32, 1.83]
SMS, 2017 21 54 25 57 33.9 0.89 [0.57, 1.38]
PARTITA, 2022 1 23 4 24 1.8 0.26 [0.03, 2.16]
SURVIVE VT, 2022 13 71 27 73 21.8 0.50 [0.28, 0.88]
REML Model for All Studies (Q = 3.67, df = 4, p for heterogeneity = 0.45; I² = 9.8%) 0.66 [0.50, 0.88]
Prediction interval –0.76 – –0.06
p for overall effect = 0.005
0.04
0.2
1
5
25
Favours ablation < Relative Risk > Favours medical therapy


Study and Year
Ablation
Events
N
Medical therapy
Events
N
Weight (%)
Relative risk [95% CI]
Relative risk of hospitalisation
CALYPSO, 2014 5 13 7 14 8.9 0.77 [0.32, 1.83]
VANISH, 2016 33 127 39 132 38.9 0.88 [0.59, 1.30]
SMS, 2017 21 54 25 57 31.3 0.89 [0.57, 1.38]
PARTITA, 2022 1 23 4 24 1.5 0.26 [0.03, 2.16]
SURVIVE VT, 2022 13 71 27 73 19.4 0.50 [0.28, 0.88]
REML Model for All Studies (Q = 4.09, df = 4, p for heterogeneity = 0.39; I² = 5.1%) 0.77 [0.59, 0.99]
Prediction interval –0.56 – 0.03
p for overall effect = 0.044
0.04
0.2
1
5
25
Favours ablation < Relative Risk > Favours medical therapy

Section 6 – Supplementary figures for trials recruiting only patients with prior myocardial infarction

Figure S14. Effect of VT ablation on mortality
Forest plots for all-cause mortality using trial-level data.

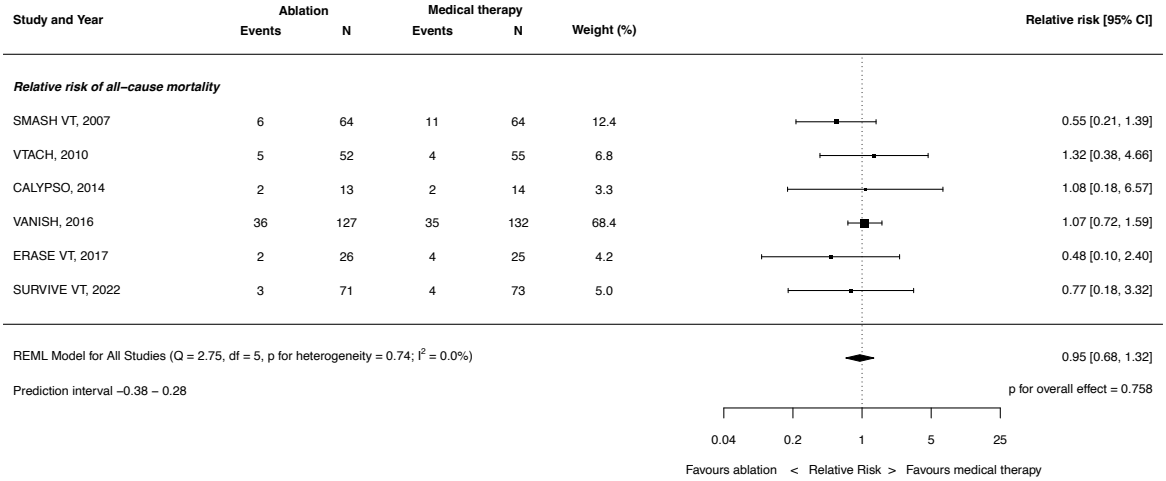


Figure S15. Effect of VT ablation on VT recurrence
Forest plots for VT recurrence using trial-level data.

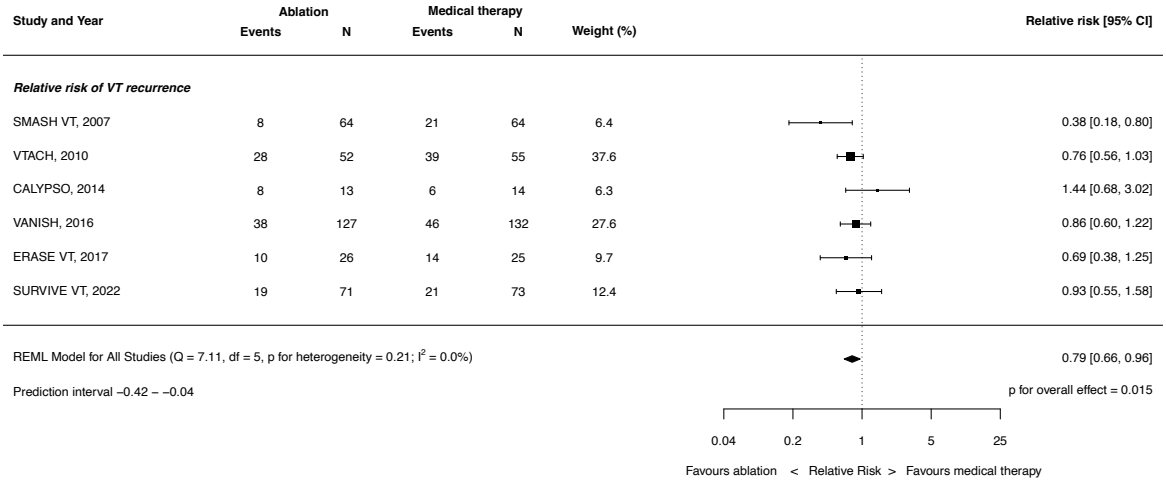


Figure S16. Effect of VT ablation on ICD shocks
Forest plots for ICD shocks using trial-level data.

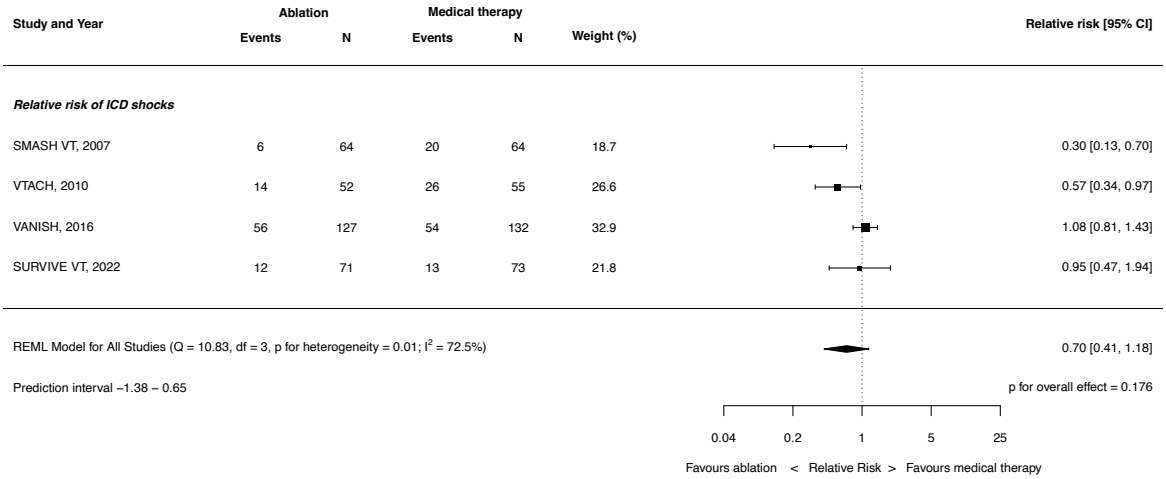
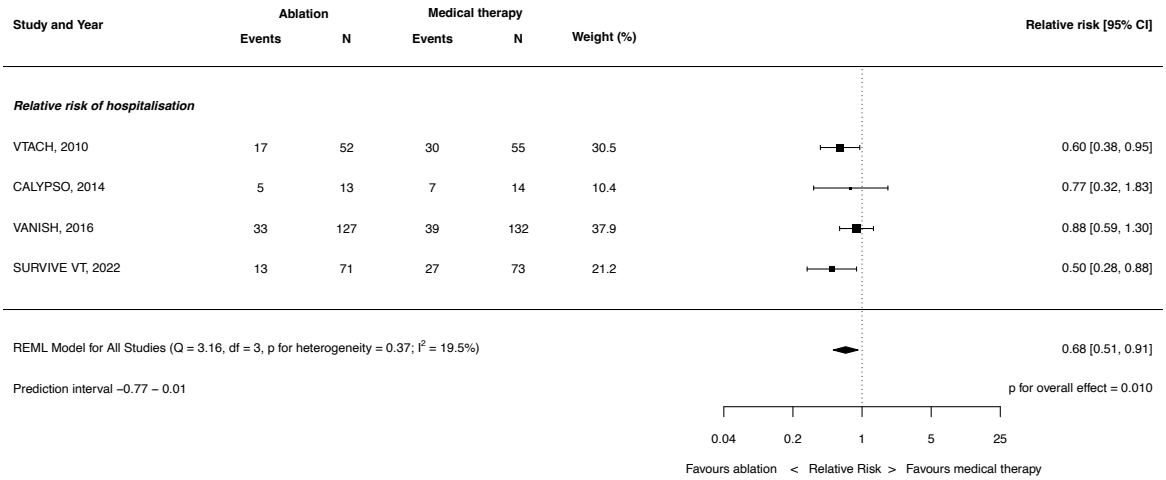


Figure S17. Effect of VT ablation on all-cause hospitalisation
Forest plots for all-cause hospitalisation using trial-level data.



Section 7 – Supplementary figures for trials containing patients with any proportion of prior myocardial infarction

Figure S18. Effect of VT ablation on mortality

Forest plots for all-cause mortality using trial-level data.

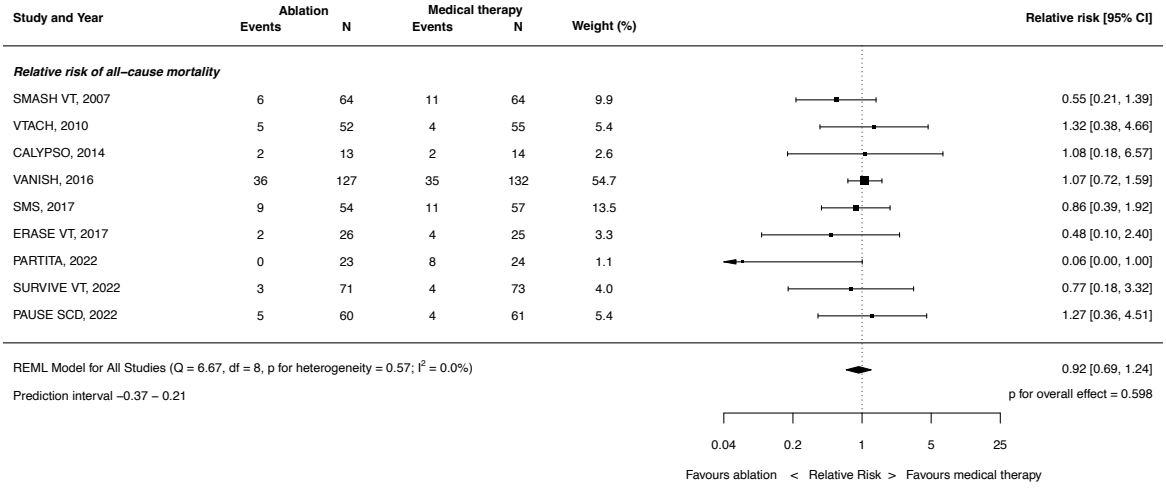


Figure S19. Effect of VT ablation on VT recurrence

Forest plots for VT recurrence using trial-level data.

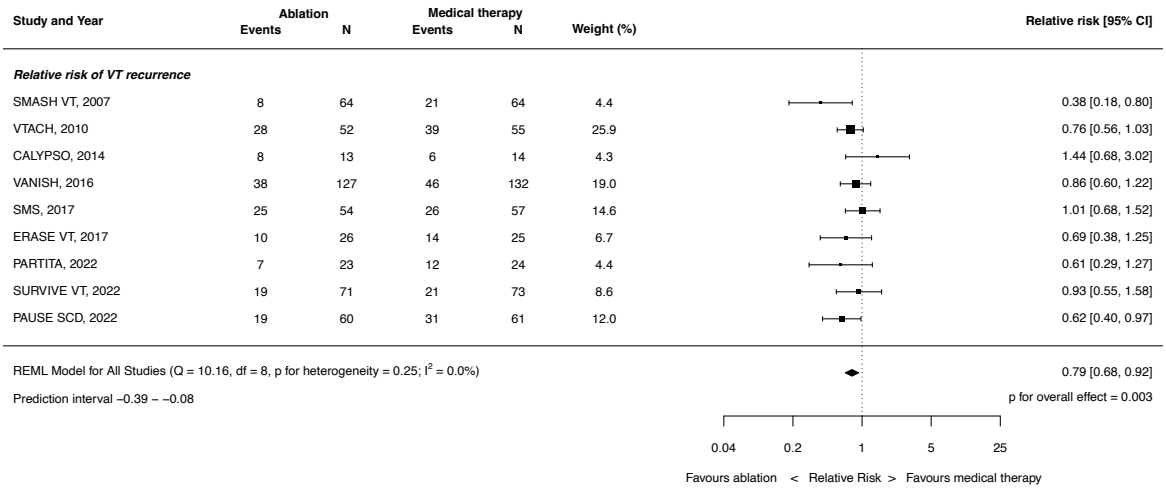


Figure S20. Effect of VT ablation on ICD shocks

Forest plots for ICD shocks using trial-level data.

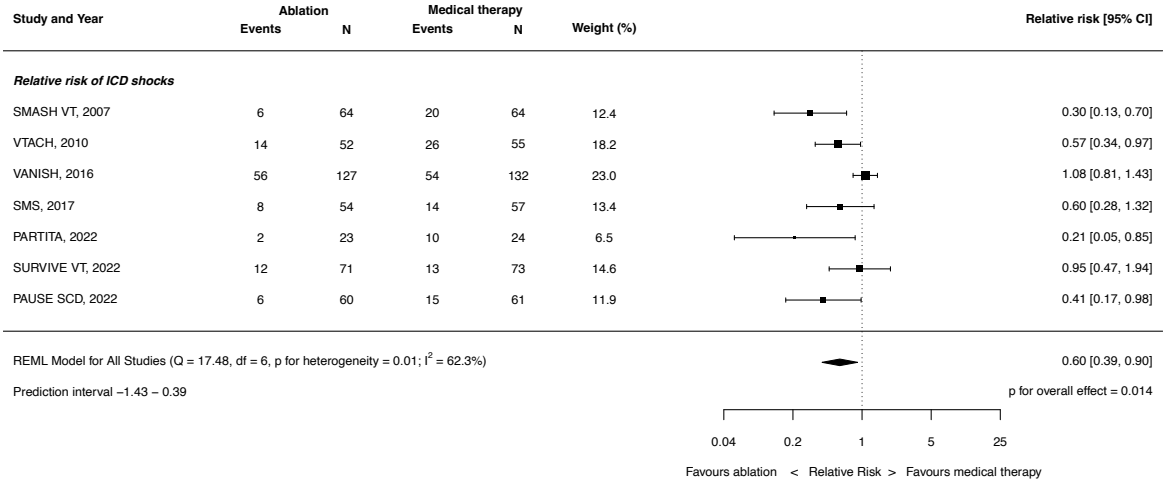


Figure S21. Effect of VT ablation on all-cause hospitalisation

Forest plots for all-cause hospitalisation using trial-level data.