

One-Year Mortality and Cause of Death after Stereotactic Radiation Therapy for Refractory Ventricular Arrhythmias

Supplemental Data

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I) Supplement 1: PRISMA 2020 Abstract Checklists

Abstract checklist	Item #	Checklist item	Reported (Yes/No)
TITLE			
Title	1	Identify the report as a systematic review.	Yes
BACKGROUND			
Objectives	2	Provide an explicit statement of the main objective(s) or question(s) the review addresses.	Yes
METHODS			
Eligibility criteria	3	Specify the inclusion and exclusion criteria for the review.	Yes
Information sources	4	Specify the information sources (e.g. databases, registers) used to identify studies and the date when each was last searched.	Yes
Risk of bias	5	Specify the methods used to assess risk of bias in the included studies.	Yes
Synthesis of results	6	Specify the methods used to present and synthesize results.	Yes
RESULTS			
Included studies	7	Give the total number of included studies and participants and summarize relevant characteristics of studies.	Yes
Synthesis of results	8	Present results for main outcomes, preferably indicating the number of included studies and participants for each. If meta-analysis was done, report the summary estimate and confidence/credible interval. If comparing groups, indicate the direction of the effect (i.e. which group is favored).	Yes
DISCUSSION			
Limitations of evidence	9	Provide a brief summary of the limitations of the evidence included in the review (e.g. study risk of bias, inconsistency and imprecision).	Yes
Interpretation	10	Provide a general interpretation of the results and important implications.	Yes
OTHER			
Funding	11	Specify the primary source of funding for the review.	Yes
Registration	12	Provide the register name and registration number.	Yes

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

I) Supplement 2: PRISMA 2020 Checklists

Section and Topic	Item #	Checklist item	Location where item is reported
TITLE			
Title	1	Identify the report as a systematic review.	p1
ABSTRACT			
Abstract	2	See the PRISMA 2020 for Abstracts checklist.	p2
INTRODUCTION			
Rationale	3	Describe the rationale for the review in the context of existing knowledge.	p4
Objectives	4	Provide an explicit statement of the objective(s) or question(s) the review addresses.	p4
METHODS			
Eligibility criteria	5	Specify the inclusion and exclusion criteria for the review and how studies were grouped for the syntheses.	p5
Information sources	6	Specify all databases, registers, websites, organisations, reference lists and other sources searched or consulted to identify studies. Specify the date when each source was last searched or consulted.	p4
Search strategy	7	Present the full search strategies for all databases, registers and websites, including any filters and limits used.	p5
Selection process	8	Specify the methods used to decide whether a study met the inclusion criteria of the review, including how many reviewers screened each record and each report retrieved, whether they worked independently, and if applicable, details of automation tools used in the process.	p5
Data collection process	9	Specify the methods used to collect data from reports, including how many reviewers collected data from each report, whether they worked independently, any processes for obtaining or confirming data from study investigators, and if applicable, details of automation tools used in the process.	p5
Data items	10a	List and define all outcomes for which data were sought. Specify whether all results that were compatible with each outcome domain in each study were sought (e.g. for all measures, time points, analyses), and if not, the methods used to decide which results to collect.	p5
	10b	List and define all other variables for which data were sought (e.g. participant and intervention characteristics, funding sources). Describe any assumptions made about any missing or unclear information.	p5
Study risk of bias assessment	11	Specify the methods used to assess risk of bias in the included studies, including details of the tool(s) used, how many reviewers assessed each study and whether they worked independently, and if applicable, details of automation tools used in the process.	p5
Effect measures	12	Specify for each outcome the effect measure(s) (e.g. risk ratio, mean difference) used in the synthesis or presentation of results.	p6
Synthesis methods	13a	Describe the processes used to decide which studies were eligible for each synthesis (e.g. tabulating the study intervention characteristics and comparing against the planned groups for each synthesis (item #5)).	p6
	13b	Describe any methods required to prepare the data for presentation or synthesis, such as handling of missing summary statistics, or data conversions.	p6
	13c	Describe any methods used to tabulate or visually display results of individual studies and syntheses.	Table1, Figure 1, Supp.Data
	13d	Describe any methods used to synthesize results and provide a rationale for the choice(s). If meta-analysis was performed, describe the model(s), method(s) to identify the presence and extent of statistical heterogeneity, and software package(s) used.	p7
	13e	Describe any methods used to explore possible causes of heterogeneity among study results (e.g. subgroup analysis, meta-regression).	p7

	13f	Describe any sensitivity analyses conducted to assess robustness of the synthesized results.	p7, 10
Reporting bias assessment	14	Describe any methods used to assess risk of bias due to missing results in a synthesis (arising from reporting biases).	p6
Certainty assessment	15	Describe any methods used to assess certainty (or confidence) in the body of evidence for an outcome.	p8
RESULTS			
Study selection	16a	Describe the results of the search and selection process, from the number of records identified in the search to the number of studies included in the review, ideally using a flow diagram.	Figure 1
	16b	Cite studies that might appear to meet the inclusion criteria, but which were excluded, and explain why they were excluded.	Figure 1
Study characteristics	17	Cite each included study and present its characteristics.	Table 1
Risk of bias in studies	18	Present assessments of risk of bias for each included study.	Suppl. Data
Results of individual studies	19	For all outcomes, present, for each study: (a) summary statistics for each group (where appropriate) and (b) an effect estimate and its precision (e.g. confidence/credible interval), ideally using structured tables or plots.	Figure 2
Results of syntheses	20a	For each synthesis, briefly summarise the characteristics and risk of bias among contributing studies.	Suppl. Data
	20b	Present results of all statistical syntheses conducted. If meta-analysis was done, present for each the summary estimate and its precision (e.g. confidence/credible interval) and measures of statistical heterogeneity. If comparing groups, describe the direction of the effect.	Result section Suppl. Data
	20c	Present results of all investigations of possible causes of heterogeneity among study results.	Result section
	20d	Present results of all sensitivity analyses conducted to assess the robustness of the synthesized results.	Result section, Suppl. Data
Reporting biases	21	Present assessments of risk of bias due to missing results (arising from reporting biases) for each synthesis assessed.	Result section, Suppl. Data
Certainty of evidence	22	Present assessments of certainty (or confidence) in the body of evidence for each outcome assessed.	Fig 2 Suppl. Data
DISCUSSION			
Discussion	23a	Provide a general interpretation of the results in the context of other evidence.	Main findings, p9
	23b	Discuss any limitations of the evidence included in the review.	Limitations, p11
	23c	Discuss any limitations of the review processes used.	Limitations, p11
	23d	Discuss implications of the results for practice, policy, and future research.	Conclusion, p12
OTHER INFORMATION			
Registration and protocol	24a	Provide registration information for the review, including register name and registration number, or state that the review was not registered.	Title page, p1
	24b	Indicate where the review protocol can be accessed, or state that a protocol was not prepared.	Title page, p1
	24c	Describe and explain any amendments to information provided at registration or in the protocol.	NA
Support	25	Describe sources of financial or non-financial support for the review, and the role of the funders or sponsors in the review.	Title page, p1
Competing interests	26	Declare any competing interests of review authors.	Title page, p1
Availability of	27	Report which of the following are publicly available and where they can be	Title page,

data, code and other materials		found: template data collection forms; data extracted from included studies; data used for all analyses; analytic code; any other materials used in the review.	p1
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For more information, visit: <http://www.prisma-statement.org/>

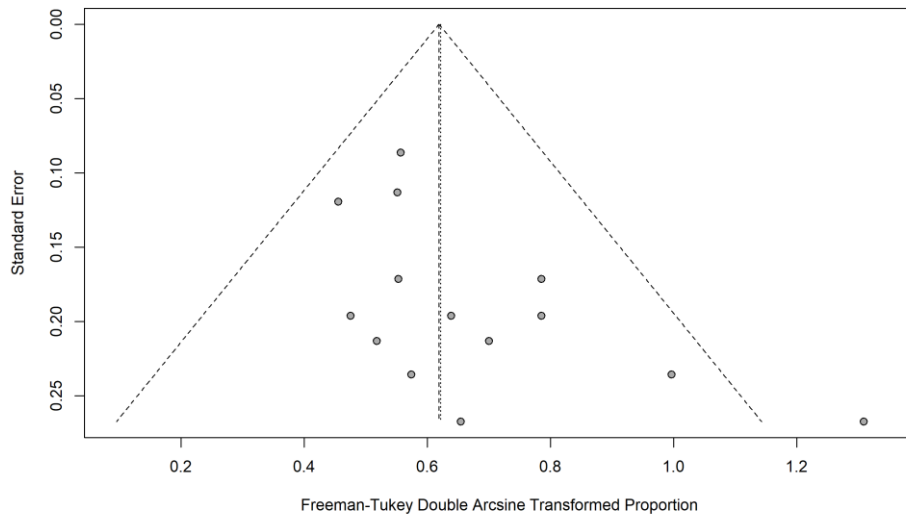
II) Supplemental Table 1. Quality Assessment using NIH quality assessment tool for case series studies

Author	Was the study question or objective clearly stated?	Was the study population clearly and fully described, including a case definition?	Were the cases consecutive?	Were the subjects comparable?	Was the intervention clearly described?	Were the outcome measures clearly defined, valid, reliable, and implemented consistently across all study participants?	Was the length of follow-up adequate?	Were the statistical methods well described?	Were the results well described?	Quality rating (good, fair, poor)*
Cuculich et al, 2017	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Good
Robinson et al, 2019	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Good
Gianni et al, 2020	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Good
Gordon Ho et al, 2021	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Good
Chin et al, 2021	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Good
Carbucicchio et al, 2021	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Good
Lee et al, 2021	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Good
Peichl et al, 2021	Yes	No	Yes	NR	Yes	NR	Yes	Yes	Yes	Fair
Li-Ting Ho et al, 2021	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Good
Yugo et al, 2021	Yes	No	Yes	Yes	Yes	Yes	No	NR	Yes	Fair
Qian et al, 2022	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Good
Ninni et al, 2022	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Good

Wight et al, 2022	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Good
Molon et al, 2022	Yes	NO	Yes	Yes	Yes	Yes	No	NR	Yes	Fair
Aras et al, 2022	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Good
van der Ree et al, 2023	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Good

* Overall Quality according to the NIH quality assessment tool for case series studies. Good: Met 7–9 criteria, Fair: Met 4–6 criteria, Poor: Met 0–3 criteria. NR = not reported. Poor, fair, and good quality of studies are considered to have high, moderate, and low risk of bias, respectively.

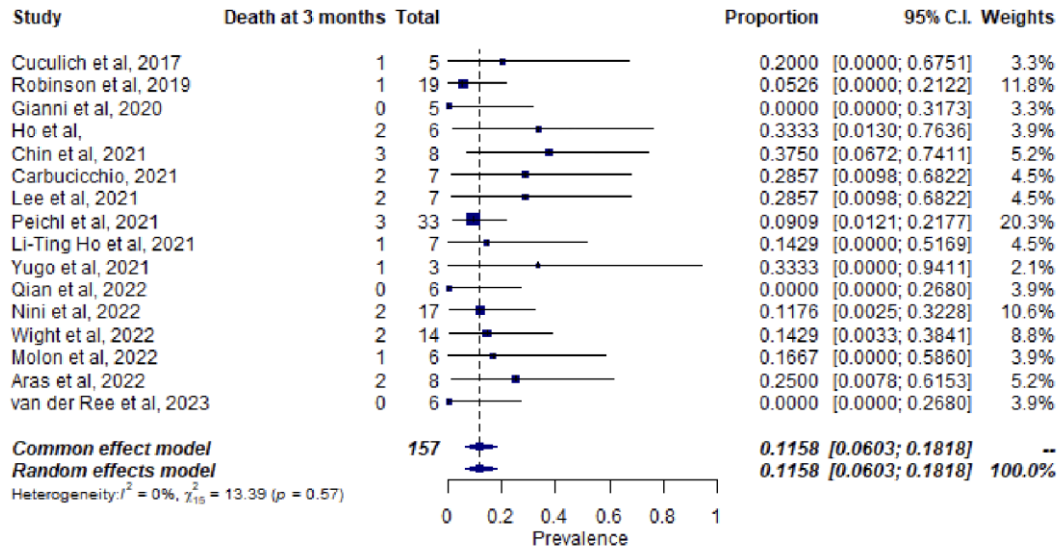
III) Supplemental Figure 1: Funnel plots for the 12-month all-cause mortality



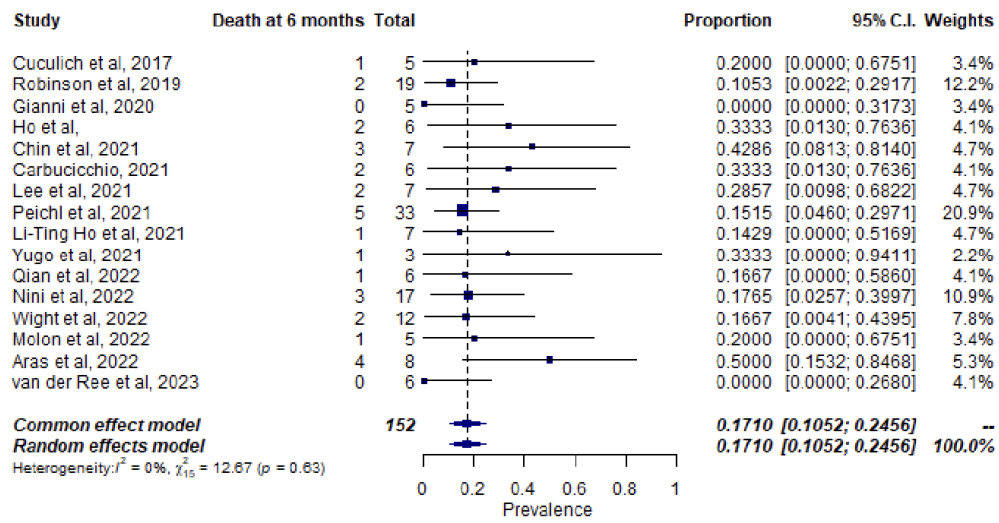
Supplemental Table 2: Egger’s tests for asymmetry and small-study effect regarding the 12-month all-cause mortality

Egger's test	Intercept	Confidence Interval	t	p
12-month all-cause mortality	0.330	0.074-0.566	1.429	0.175

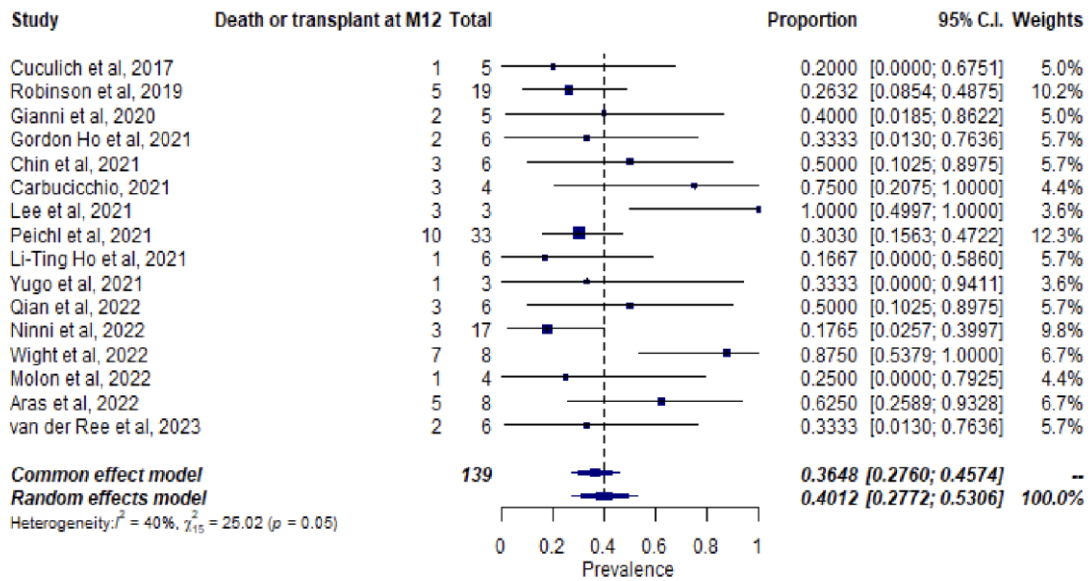
III) Supplemental Figure 2: Forest plot of the 3-month all-cause mortality



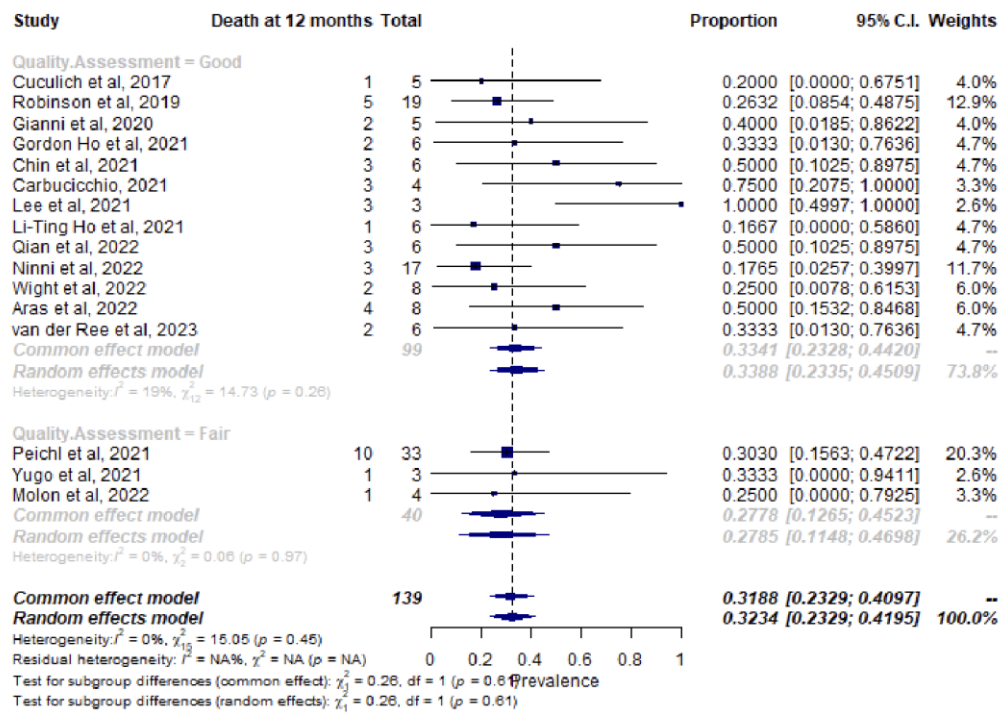
III) Supplemental Figure 3: Forest plot of the 6-month all-cause mortality



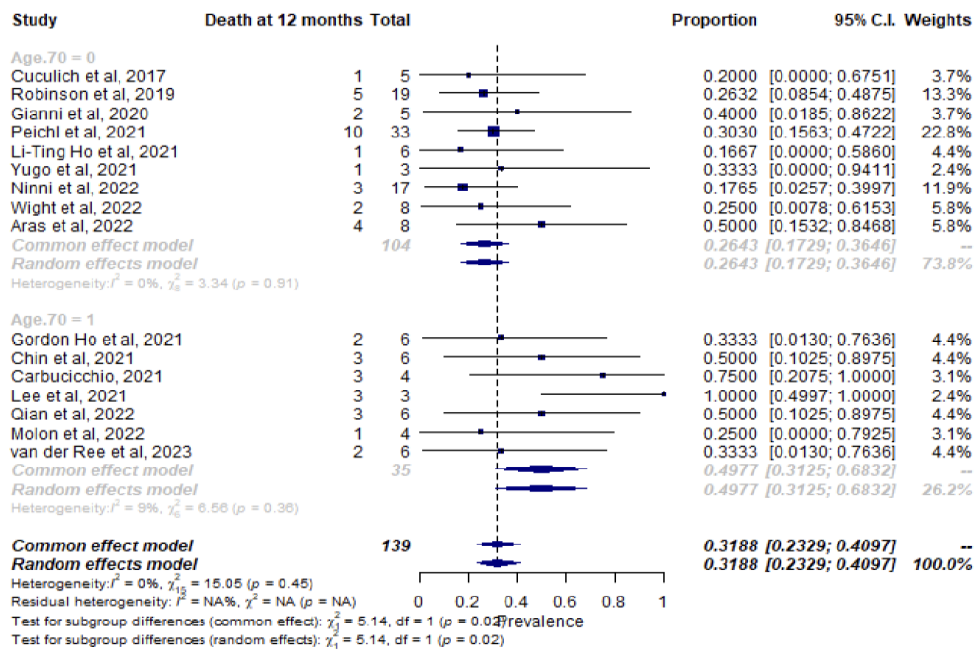
III) Supplemental Figure 4: Forest plot of mortality and heart transplant at 12 months



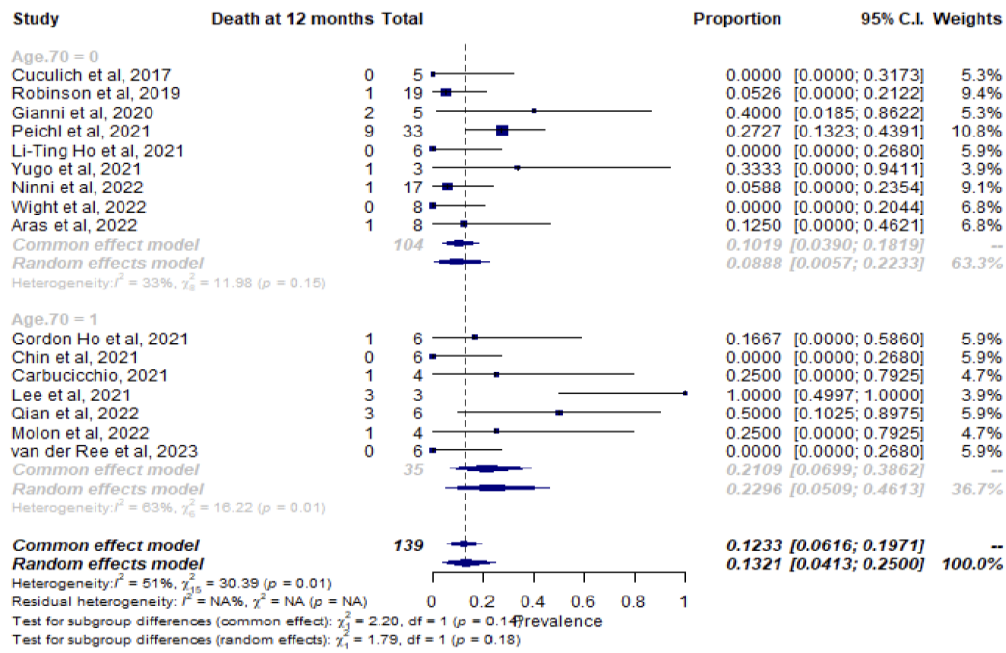
III) Supplemental Figure 5: Forest plot of the 12-month all-cause mortality and subgroup analysis according to the study quality assessment using the NIH Quality Assessment Tool for case Series



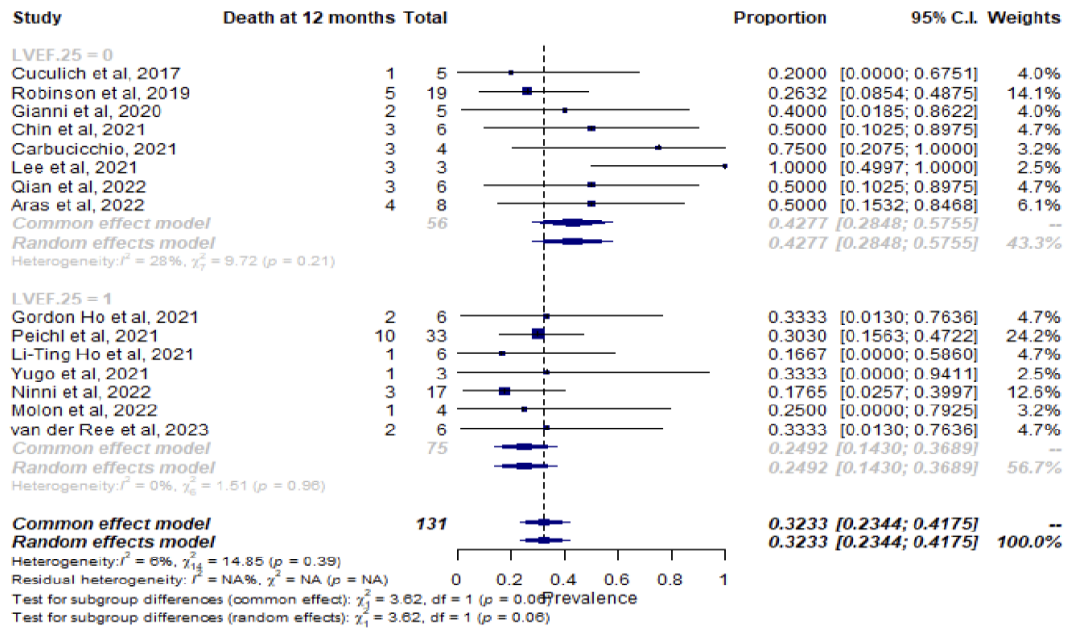
III) Supplemental Figure 6: Forest plot of the 12-month all-cause mortality and subgroup analysis according to the mean age of the study population



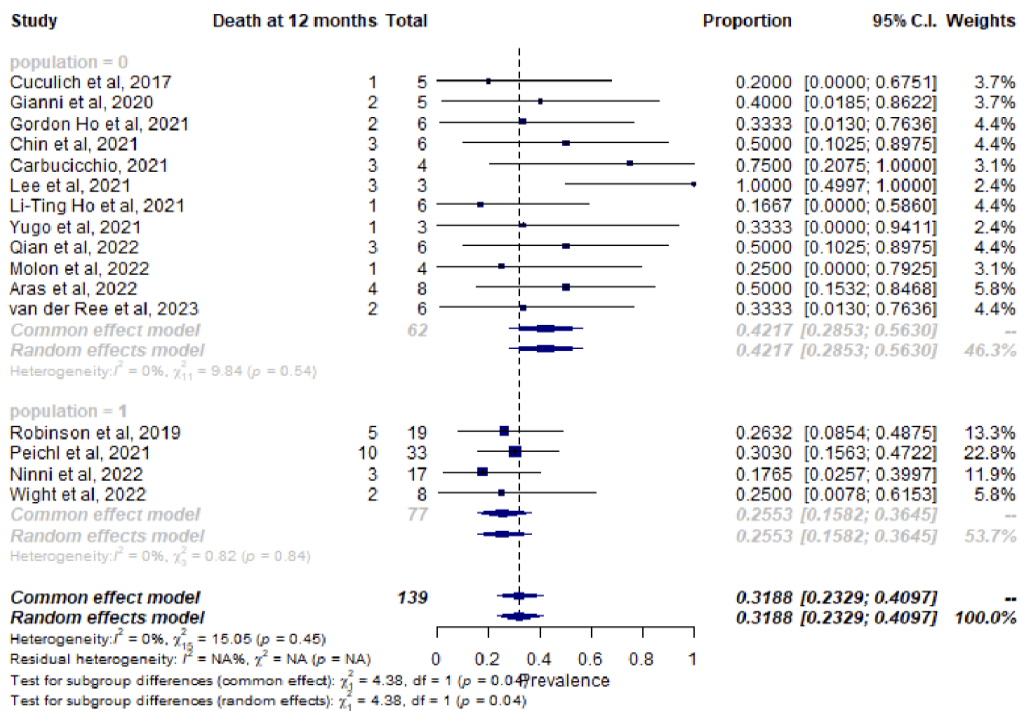
III) Supplemental Figure 7: Forest plot of the 12-month HF-related mortality and subgroup analysis according to the mean age of the study population



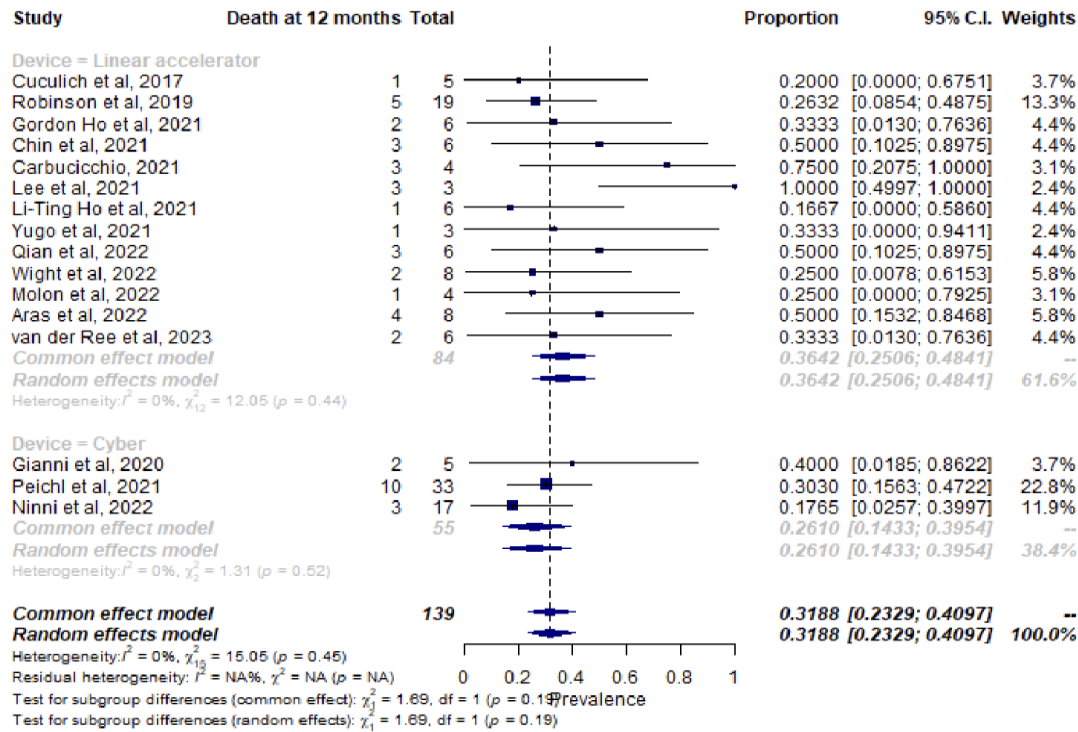
III) Supplemental Figure 8: Forest plot of the 12-month all-cause mortality and subgroup analysis according to the median left ventricular ejection fraction of the study population



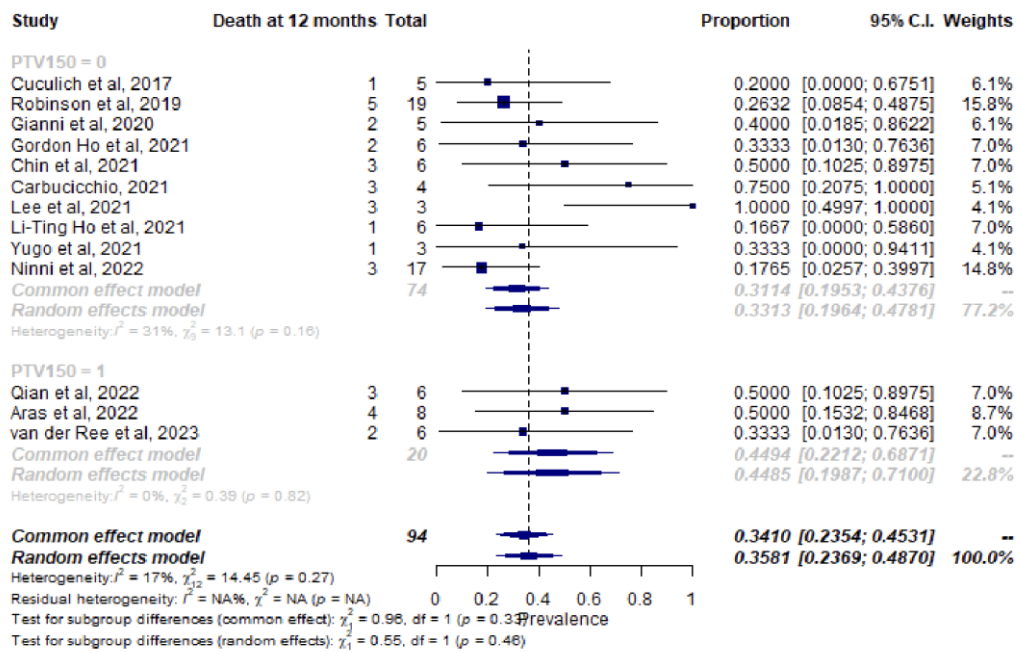
III) Supplemental Figure 9: Forest plot of the 12-month all-cause mortality and subgroup analysis according to the sample size of the study



III) Supplemental Figure 10: Forest plot of the 12-month all-cause mortality and subgroup analysis according to the radiation therapy device



III) Supplemental Figure 11: Forest plot of the 12-month all-cause mortality and subgroup analysis according to the mean planning target volume



III) Supplemental Figure 12: Forest plot of the 12-month HF-related mortality and subgroup analysis according to the mean planning target volume

