

## Supplementary

**Table S1** Search strategies for each database

### PubMed

Number	Search items	Number of retrieved articles
#1	"Exercise"[MeSH Terms]	229542
#2	"exercis*" [Title/Abstract] OR "physical activit*" [Title/Abstract] OR "physical exercis*" [Title/Abstract] OR "acute exercis*" [Title/Abstract] OR "isometric exercis*" [Title/Abstract] OR "aerobic exercis*" [Title/Abstract] OR "exercise training*" [Title/Abstract]	438,665
#3	#1 OR #2	522,518
#4	"Prostatic Neoplasms"[MeSH Terms]	141,509
#5	"prostate neoplasm*" [Title/Abstract] OR "prostatic neoplasm*" [Title/Abstract] OR "prostate cancer*" [Title/Abstract] OR "prostatic cancer*" [Title/Abstract]	140,535
#6	"PCa" [Title/Abstract] OR "Castration-Resistant Prostate Cancer" [Title/Abstract] OR "CRPC" [Title/Abstract] OR "Metastatic castration resistant prostate cancer" [Title/Abstract] OR "mCRPC" [Title/Abstract]	59,994
#7	"ADT" [Title/Abstract] OR "androgen deprivation therapy" [Title/Abstract]	9181
#8	(#4 OR #5 OR #6) AND #7	7501
#9	#3 AND #8	2,128
#10	"systematic review" [Title/Abstract] OR "Clinical Trial Overviews" [Title/Abstract]	241759
#11	#9 AND #10 AND "Meta-Analysis" [Publication Type]	28

### Embase

Number	Search items	Number of retrieved articles
#1	'prostate neoplasm'/exp	243611
#2	'prostate neoplasm*':ab,ti OR 'prostatic neoplasm*':ab,ti OR 'prostate cancer':ab,ti OR 'prostate cancer*':ab,ti OR 'prostatic cancer*':ab,ti OR 'PCa':ab,ti OR 'Castration-Resistant Prostate Cancer':ab,ti OR 'CRPC':ab,ti OR 'Metastatic castration resistant prostate cancer':ab,ti OR 'mCRPC':ab,ti	255192
#3	'Exercise'/exp	401401
#4	'exercis*':ab,ti OR 'physical activit*':ab,ti OR 'physical exercis*':ab,ti OR 'acute exercis*':ab,ti OR 'isometric exercis*':ab,ti OR 'aerobic exercis*':ab,ti OR 'exercise training*':ab,ti	287231
#5	'Androgen deprivation therapy'/exp	14909
#6	'ADT':ab,ti	9896
#7	#1 OR #2	325938
#8	#3 OR #4	563123
#9	#5 OR #6	18813
#10	#7 AND #9	16572
#11	#8 AND #10	493
#12	#11 AND 'meta-analysis'/de	57

## Cochrane Library

Number	Search items	Number of retrieved articles
#1	MeSH descriptor: [Prostatic neoplasms] explode all trees	6216
#2	("Prostate Neoplasm*"):ti,ab,kw OR ("Prostatic Neoplasm*"):ti,ab,kw OR ("Prostate Cancer*"):ti,ab,kw OR ("Prostatic Cancer*"):ti,ab,kw OR ("PCa"):ti,ab,kw	19929
#3	("Castration-Resistant Prostate Cancer"):ti,ab,kw OR ("CRPC"):ti,ab,kw OR ("Metastatic castration resistant prostate cancer"):ti,ab,kw OR ("Mcrpc"):ti,ab,kw	2344
#4	#1 OR #2 OR #3	19965
#5	MeSH descriptor: [Exercise] explode all trees	28782
#6	("Exercises"):ti,ab,kw OR ("Physical Activit*"):ti,ab,kw OR ("Physical Exercis*"):ti,ab,kw OR ("Acute Exercis*"):ti,ab,kw OR ("Isometric Exercis*"):ti,ab,kw	28339
#7	("Aerobic Exercis*"):ti,ab,kw OR ("Exercise Training*"):ti,ab,kw	9859
#8	#5 OR #6 OR #7	59756
#9	("Androgen deprivation therapy"):ti,ab,kw OR (ADT):ti,ab,kw	3178
#10	#4 AND #8 AND #9	96
#11	Cochrane Reviews	0

## Web of Science

Number	Search items	Number of retrieved articles
#1	(((((TS=("prostate cancer")) OR TS=("Prostatic Neoplasms")) OR TS=("Prostate Neoplasm*")) OR TS=("Prostatic Neoplasm*")) OR TS=("Prostate Cancer*")) OR TS=("Prostatic Cancer*")) OR TS=("PCa")) OR TS=("Castration-Resistant Prostate Cancer")) OR TS=("CRPC")) OR TS=("Metastatic castration resistant prostate cancer")) OR TS=("mCRPC")	179094
#2	(((((TS=("Exercise")) OR TS=("Exercises")) OR TS=("Physical Activit*")) OR TS=("Physical Exercis*")) OR TS=("Acute Exercis*")) OR TS=("Isometric Exercis*")) OR TS=("Aerobic Exercis*")) OR TS=("Exercise Training*"))	309213
#3	(TS=("Androgen deprivation therapy")) OR TS=("ADT")	10042
#4	#3 AND #1 AND #2	442
#5	((TS=("Meta-Analysis")) OR TS= ("Clinical Trial Overviews")) OR TS= ("systematic review")	293641
#6	#4 AND #5	69

## CNKI

SU=( '前列腺癌' + ' 前列腺肿瘤' + ' 去势抵抗性前列腺癌' + ' PCa' + ' CRPC' ) AND SU=( '运动' + ' 体育锻炼' + ' 锻炼' + ' 抗阻训练' ) AND SU=( '系统评价' + ' 荟萃分析' + ' Meta' ) 13

## Wanfang

主题:( 前列腺癌 or 前列腺肿瘤 or 去势抵抗性前列腺癌 or PCa or CRPC) and 主题:( 运动 or 体育锻炼 or 锻炼 or 抗阻训练) and 主题:( 系统评价 or 荟萃分析 or Meta) 72

## VIP

任意字段 U=( 前列腺癌 OR 前列腺肿瘤 OR 去势抵抗性前列腺癌 OR PCa OR CRPC) AND U=( 运动 OR 体育锻炼 OR 锻炼 OR 抗阻训练) AND U=( 系统评价 OR 荟萃分析 OR Meta) 9

## CBM

















































( "系统评价" [全部字段:智能] OR "荟萃分析" [全部字段:智能] OR "Meta" [全部字段:智能] ) AND (( "前列腺癌" [全部字段:智能] OR "前列腺肿瘤" [全部字段:智能] OR "去势抵抗性前列腺癌" [全部字段:智能] OR "PCa" [全部字段:智能] ) OR "CRPC" [全部字段:智能] OR "mCRPC" [全部字段:智能] ) OR "前列腺癌" [不加权:扩展] ) AND (( "运动" [全部字段:智能] OR "体育锻炼" [全部字段:智能] OR "锻炼" [全部字段:智能] OR "抗阻训练" [全部字段:智能] ) OR ( "运动" [不加权:扩展] )) 17




**Table S2** Results of the AMSTAR-2 assessments (27)

Item	Yunfeng, G., <i>et al.</i> (2017)	Bigaran, A., <i>et al.</i> (2021)	Chen, Z., <i>et al.</i> (2019)	Shao, W., <i>et al.</i> (2022)	Teleni, L., <i>et al.</i> (2016)	Ussing, A., <i>et al.</i> (2022)	Yang, B., <i>et al.</i> (2017).	Ying, M., <i>et al.</i> (2018)
1. Did the research questions and inclusion criteria for the review include the components of PICO?	Y	Y	Y	Y	Y	Y	Y	Y
2. Did the report of the review contain an explicit statement that the review methods were established prior to the conduct of the review and did the report justify any significant deviations from the protocol?	N	Y	Y	Y	Y	Y	N	N
3. Did the review authors explain their selection of the study designs for inclusion in the review?	Y	Y	Y	Y	Y	Y	Y	Y
4. Did the review authors use a comprehensive literature search strategy?	Y	Y	PY	Y	Y	Y	Y	PY
5. Did the review authors perform study selection in duplicate?	Y	Y	Y	Y	Y	Y	Y	Y
6. Did the review authors perform data extraction in duplicate?	Y	Y	Y	Y	Y	Y	Y	Y
7. Did the review authors provide a list of excluded studies and justify the exclusions?	N	Y	Y	PY	Y	PY	PY	N
8. Did the review authors describe the included studies in adequate detail?	Y	Y	Y	Y	Y	Y	Y	Y
9. Did the review authors use a satisfactory technique for assessing the risk of bias (RoB) in individual studies that were included in the review?	Y	Y	Y	Y	Y	Y	Y	Y
10. Did the review authors report on the sources of funding for the studies included in the review?	N	Y	N	N	Y	N	N	N
11. If meta-analysis was performed, did the review authors use appropriate methods for statistical combination of results?	Y	Y	Y	Y	Y	Y	Y	Y
12. If meta-analysis was performed, did the review authors assess the potential impact of RoB in individual studies on the results of the meta-analysis or other evidence synthesis?	N	N	Y	Y	PY	Y	Y	N
13. Did the review authors account for RoB in primary studies when interpreting/discussing the results of the review?	Y	Y	Y	N	Y	Y	Y	N
14. Did the review authors provide a satisfactory explanation for, and discussion of, any heterogeneity observed in the results of the review?	Y	N	Y	Y	Y	Y	Y	Y
15. If they performed quantitative synthesis did the review authors carry out an adequate investigation of publication bias (small study bias) and discuss its likely impact on the results of the review?	N	Y	N	N	Y	Y	N	Y
16. Did the review authors report any potential sources of conflict of interest, including any funding they received for conducting the review?	N	Y	N	N	Y	Y	N	N
Overall Quality	Very low	Moderate	Low	Very low	Moderate	Moderate	Very low	Very low

Y, yes; PY, partially yes; N, no. The contents of the table can be publicly referenced.

**Table S3** Results of the ROBIS assessments (28)

Review	Phase 1	Phase 2			Phase 3	
	ASSESSING RELEVANCE (participants, interventions, comparisons, outcomes)	Domain 1: Study ELIGIBILITY CRITERIA	Domain 2: identification and selection of studies	Domain 3: DATA COLLECTION AND STUDY APPRAISAL	Domain 4: SYNTHESIS AND FINDINGS	RISK OF BIAS IN THE REVIEW
Yunfeng, G., <i>et al.</i> (2017)						
Bigaran, A., <i>et al.</i> (2021)						
Chen, Z., <i>et al.</i> (2019)						
Shao, W., <i>et al.</i> (2022)						
Teleni, L., <i>et al.</i> (2016)						
Ussing, A., <i>et al.</i> (2022)						
Yang, B., <i>et al.</i> (2017).						
Ying, M., <i>et al.</i> (2018)						

 Low risk;  High risk;  Unclear risk.

**Table S4** Results of the PRISMA (29)

Section/Topic	Items	Yunfeng, G, <i>et al.</i> (2017)	Bigaran, A., <i>et al.</i> (2021)	Chen, Z., <i>et al.</i> (2019)	Shao, W., <i>et al.</i> (2022)	Teleni, L., <i>et al.</i> (2016)	Ussing, A., <i>et al.</i> (2022)	Yang, B., <i>et al.</i> (2017).	Ying, M., <i>et al.</i> (2018)
TITLE	1. Title	Y	Y	Y	Y	Y	Y	Y	Y
ABSTRACT	2. Structured summary	Y	Y	Y	Y	Y	Y	Y	Y
INTRODUCTION	3. Rationale	Y	Y	Y	Y	Y	Y	Y	Y
	4. Objectives	Y	Y	Y	Y	Y	Y	Y	Y
	5. Protocol and registration	N	Y	Y	Y	Y	Y	N	N
	6. Eligibility criteria	Y	Y	Y	Y	Y	Y	Y	Y
	7. Information sources	Y	Y	Y	Y	Y	Y	Y	Y
	8. Search	Y	Y	Y	Y	Y	Y	Y	Y
	9. Study selection	Y	Y	Y	Y	Y	Y	Y	Y
	10. Data collection process	Y	Y	Y	Y	Y	Y	Y	Y
METHODS	11. Data items	Y	Y	Y	Y	Y	Y	Y	Y
	12. Risk of bias in individual studies	Y	N	Y	Y	Y	Y	Y	N
	13. Summary measures	Y	Y	Y	Y	Y	Y	Y	Y
	14. Synthesis of results	Y	Y	Y	Y	Y	Y	Y	Y
	15. Risk of bias across studies	Y	Y	Y	Y	Y	Y	Y	N
	16. Additional analyses	N	PY	PY	Y	PY	Y	Y	PY
	17. Study selection	Y	Y	Y	Y	Y	Y	Y	Y
	18. Study characteristics	Y	Y	Y	Y	Y	Y	Y	Y
	19. Risk of bias within studies	N	Y	Y	Y	Y	Y	Y	N
RESULTS	20. Results of individual studies	Y	Y	Y	Y	Y	Y	Y	Y
	21. Synthesis of results	Y	Y	Y	Y	Y	Y	Y	Y
	22. Risk of bias across studies	Y	Y	Y	Y	Y	Y	Y	N
	23. Additional analysis	N	PY	N	PY	PY	Y	PY	Y
	24. Summary of evidence	N	Y	Y	Y	Y	Y	Y	Y
DISCUSSION	25. Limitations	Y	Y	N	Y	Y	PY	Y	Y
	26. Conclusions	Y	Y	Y	Y	Y	Y	Y	Y
FUNDING	27. Funding	N	N	N	N	Y	Y	N	N

Y, yes; PY, partially yes; N, no.

**Table S5** Summary of evidence

SR/MA	Intervention measures	Outcomes	Synthesis of results	No. of studies (sample size)
Yunfeng, G, <i>et al.</i> (2017)	Exercise VS. Usual care	Body composition		11 (826)
		BMI	SMD=-0.33, 95%CI [-0.55, -0.12], I <sup>2</sup> =38%, P=0.002, <6 months	5 (346)
			SMD=-0.59, 95%CI [-1.01, 0.17], I <sup>2</sup> =25%, P=0.006, >6 months	2 (91)
		LBM	SMD=-0.08, 95%CI [-0.20, 0.30], I <sup>2</sup> =0%, P=0.57	4 (196)
		Total body fat (%)	SMD=-0.22, 95%CI [-0.42, -0.01], I <sup>2</sup> =0%, P=0.04	5 (398)
		Physical function		8 (544)
		Leg press	SMD=0.78, 95%CI [0.57, 0.99], I <sup>2</sup> =0%, P<0.00001	5 (417)
		Chest press	SMD=0.71, 95%CI [0.50, 0.92], I <sup>2</sup> =0%, P<0.00001	6 (428)
		VO <sub>2</sub> peak	SMD=0.35, 95%CI [0.04, 0.66], I <sup>2</sup> =0%, P=0.03, <6 months	3 (202)
			SMD=0.59, 95%CI [0.16, 1.03], I <sup>2</sup> =0%, P=0.007, >6 months	2 (105)
		Cardiometabolic changes		5 (401)
		Total serum cholesterol	SMD=0.35, 95%CI [0.1, 0.61], I <sup>2</sup> =0%, P=0.007	4 (238)
		Triglyceride	SMD=0.27, 95%CI [-0.5, 1.03], I <sup>2</sup> =87%, P=0.5	4 (238)
		HDL	SMD=0.21, 95%CI [-0.13, 0.55], I <sup>2</sup> =0%, P=0.08	3 (138)
		Fasting glucose	SMD=-0.30, 95%CI [-0.64, 0.04], I <sup>2</sup> =0%, P=0.30	4 (238)
		Fatigue	SMD=0.84, 95%CI [-1.43, 3.10], I <sup>2</sup> =51%, P=0.85, <6 months	5 (433)
			SMD=-9.3, 95%CI [-16.22, -2.39], I <sup>2</sup> =49%, P=0.003, >6 months	3 (321)
		BMD	SMD=-0.03, 95%CI [-0.07, 0.01], I <sup>2</sup> =0%, P=0.12	3 (171)
		Sexual health	SMD=0.66, 95%CI [0.35, 0.97], I <sup>2</sup> =2%, P<0.00001	3 (220)
	AET VS. RET	Fatigue	SMD=0.09, 95%CI [-0.27, 0.44], I <sup>2</sup> =51%, P=0.63	3 (350)
Body fat mass		SMD=-0.14, 95%CI [-0.47, 0.18], I <sup>2</sup> =51%, P=0.60	2 (187)	
VO <sub>2</sub> peak		SMD=-0.12, 95%CI [-0.44, 0.21], I <sup>2</sup> =0%, P=0.63	2 (187)	
Bigaran, A., <i>et al.</i> (2021)	Exercise VS. Usual care	Exercise capacity		
		The 400-m-walk test, s	MD=-10.11 s, 95% CI [-14.34, -5.88]; I <sup>2</sup> =0%, P<0.00001	3 (222)
		6-min walk test, m	MD=52.57, 95% CI [-3.03, 108.16]; I <sup>2</sup> =0%, P=0.06	3 (180)
		Blood pressure		
		Diastolic blood pressure, mmHg	MD=-2.22 mmHg, 95% CI [-3.82, -0.61]; I <sup>2</sup> =0%, P=0.007	5 (357)
		Fasting blood glucose, mmol/L	MD=-0.38 mmol/L, 95% CI [-0.65, -0.11]; I <sup>2</sup> =0%, P=0.006	3 (217)
		Inflammatory markers		
		C-reactive protein, mg/L	MD=-1.16 mg/L, 95% CI [-2.11, -0.20]; I <sup>2</sup> =47%, P=0.02	3 (217)
		Body composition		
		Whole-body lean mass, kg	MD=0.70 kg, 95% CI [0.39, 1.01]; I <sup>2</sup> =0%, P<0.0001	5 (372)
		Appendicular lean mass, kg	MD=0.59 kg, 95% CI [0.43, 0.76]; I <sup>2</sup> =0%, P<0.00001	3 (178)
		Whole-body fat mass, kg	MD=-0.67 kg, 95% CI [-1.08, -0.27]; I <sup>2</sup> =51%, P=0.001	5 (372)
		Whole-body fat percentage, %	MD=-0.79, 95% CI [-1.16, -0.42]; I <sup>2</sup> =59%, P<0.0001	4 (275)
Trunk fat mass, kg	MD=-0.49 kg, 95% CI [-0.87, -0.12]; I <sup>2</sup> =51%, P=0.01	4 (275)		
Chen, Z., <i>et al.</i> (2019)	Supervised Exercise VS. Usual care	Lean Mass, kg	MD=-0.49 kg, 95% CI [-0.76, 1.74]; I <sup>2</sup> =0%, P=0.44	7 (490)
		Chest press	MD=3.15 kg, 95% CI [2.46, 3.83]; I <sup>2</sup> =0%, P<0.00001	5 (335)
		Leg press	MD=27.46 kg, 95% CI [15.05, 39.87]; I <sup>2</sup> =0%, P<0.0001	4 (235)
Shao, W., <i>et al.</i> (2022)	Exercise VS. Usual care	Body composition		
		LBM	MD=0.88, 95% CI [0.40, 1.36]; I <sup>2</sup> =0%, P=0.0003	9 (562)
		BFM	MD=-0.60, 95% CI [-1.10, -0.10]; I <sup>2</sup> =0%, P=0.02	9 (549)
		BFR	MD=-0.93, 95% CI [-1.39, -0.47]; I <sup>2</sup> =15%, P<0.0001	8 (428)
		Bone mineral density		
		The whole-body BMD	MD=-0.00, 95% CI [-0.01, 0.01]; I <sup>2</sup> =0%, P=0.74	4 (329)
		The lumbar BMD	MD=0.00, 95% CI [-0.00, 0.01]; I <sup>2</sup> =0%, P=0.16	7 (426)
		The total hip BMD	MD=0.00, 95% CI [-0.00, 0.01]; I <sup>2</sup> =0%, P=0.09	6 (406)
		The femoral neck BMD	MD=0.00, 95% CI [-0.00, 0.00]; I <sup>2</sup> =0%, P=0.74	5 (259)
		RET VS. Usual care	LBM	MD=1.43, 95% CI [-0.29, 3.14]; I <sup>2</sup> =58%, P=0.10
	BFM	MD=-0.21, 95% CI [-0.85, 0.44]; I <sup>2</sup> =0%, P=0.53	2 (78)	
BFR	MD=-1.48, 95% CI [-3.48, 0.52]; I <sup>2</sup> =69%, P=0.15	3 (127)		

Table S5 (continued)

Table S5 (continued)

SR/MA	Intervention measures	Outcomes	Synthesis of results	No. of studies (sample size)	
	RET and other exercise (AET) VS. Usual care	LBM	MD=0.86, 95% CI [0.16, 1.56]; I <sup>2</sup> =0%, P<0.05	6 (435)	
		BFM	MD=-1.19, 95% CI [-1.99, -0.40]; I <sup>2</sup> =0%, P<0.01	7 (471)	
		BFR	MD=-1.08, 95% CI [-1.53, -0.62]; I <sup>2</sup> =69%, P<0.01	5 (301)	
	Intensity of resistance exercise	8-12 RM	LBM	MD=2.61, 95% CI [0.89, 4.32]; I <sup>2</sup> =0%, P<0.01	2 (69)
			BFM	MD=-1.69, 95% CI [-7.36, 3.98]; I <sup>2</sup> =0%, P=0.56	2 (56)
			BFR	MD=-2.52, 95% CI [-4.13, -0.91]; I <sup>2</sup> =0%, P<0.01	3 (105)
		6-12 RM	LBM	MD=0.83, 95% CI [0.12, 1.55]; I <sup>2</sup> =0%, P<0.05	5 (385)
			BFM	MD=-1.15, 95% CI [-1.97, -0.34]; I <sup>2</sup> =0%, P<0.01	5 (385)
			BFR	MD=-1.09, 95% CI [-1.56, -0.62]; I <sup>2</sup> =0%, P<0.01	3 (224)
	Duration of exercise	<6 months	LBM	MD=0.75, 95% CI [0.23, 1.28]; I <sup>2</sup> =0%, P<0.01	4 (228)
			BFM	MD=-0.75, 95% CI [-1.60, 0.09]; I <sup>2</sup> =36%, P=0.08	4 (228)
			BFR	MD=-0.78, 95% CI [-1.20, -0.36]; I <sup>2</sup> =10%, P<0.01	4 (219)
		≥6 months	LBM	MD=1.60, 95% CI [0.37, 2.83]; I <sup>2</sup> =0%, P<0.05	5 (334)
			BFM	MD=-0.54, 95% CI [-2.28, 1.19]; I <sup>2</sup> =0%, P=0.54	5 (321)
			BFR	MD=-2.01, 95% CI [-3.23, -0.78]; I <sup>2</sup> =0%, P<0.01	4 (309)
	Duration of ADT	Immediate exercise after ADT	LBM	MD=0.93, 95% CI [0.18, 1.67]; I <sup>2</sup> =0%, P<0.05	4 (237)
			BFM	MD=-1.37, 95% CI [-2.25, -0.49]; I <sup>2</sup> =0%, P<0.01	4 (237)
			BFR	MD=-1.12, 95% CI [-1.60, -0.64]; I <sup>2</sup> =20%, P<0.01	3 (187)
		Delayed exercise after ADT	LBM	MD=1.02, 95% CI [0.08, 1.96]; I <sup>2</sup> =0%, P<0.05	5 (325)
			BFM	MD=-0.23, 95% CI [-0.83, 0.38]; I <sup>2</sup> =0%, P=0.47	5 (312)
			BFR	MD=-0.97, 95% CI [-1.97, 0.04]; I <sup>2</sup> =35%, P=0.06	5 (241)
Teleni, L., et al. (2016)	Exercise VS. Usual care	Quality of life			
		Health-related QoL	SMD=0.29, 95%CI [0.10, 0.49], I <sup>2</sup> =0%, P=0.003	5 (427)	
		Disease-specific QoL	SMD=0.36, 95%CI [0.11, 0.61], I <sup>2</sup> =0%, P=0.04	3 (271)	
		Metabolic risk factors			
		Total body weight	MD=0.26, 95% CI [-2.40, 2.93]; I <sup>2</sup> =0%	4 (310)	
		Waist circumference measures	MD=-0.38, 95% CI [-2.97, 2.22]; I <sup>2</sup> =0%	2 (200)	
		Body composition			
		LBM	MD=-0.20, 95% CI [-1.72, 1.32]	4 (335)	
		Total fat mass	MD=-0.61, 95% CI [-2.48, 1.26]	3 (214)	
		Percentage fat mass	MD=-0.71, 95% CI [-1.96, 0.55]	4 (335)	
		Blood pressure			
		Systolic blood pressure	MD=1.72, 95% CI [-2.47, 5.90]	3 (300)	
		Blood lipids and glucose metabolism			
		Blood glucose levels	MD=0.13, 95% CI [-0.16, 0.43]	3 (300)	
		Total cholesterol	MD=0.13, 95% CI [-0.18, 0.44]	3 (300)	
		Triglycerides	MD=-0.06, 95% CI [-0.27, 0.15]	3 (300)	
		LDL cholesterol	MD=-0.06, 95% CI [-0.20, 0.32]	3 (300)	
		HDL cholesterol	MD=-0.06, 95% CI [-0.05, 0.16]	3 (300)	
Ussing, A., et al. (2022)	Supervised Exercise VS. no exercise therapy	Diagnose-specific QoL	SMD=0.43, 95% CI [0.29, 0.58], I <sup>2</sup> =11%, P<0.00001	12 (894)	
		Health-related QoL	MD=1.34, 95% CI [-1.99, 4.67] SF-36, physical component Scale from: 0 to 100	4 (246)	
			MD=3.30, 95% CI [0.87, 5.74], SF-36, mental component	3 (198)	
		Physical performance measured by walking performance	SMD=-0.41, 95% CI [-0.60, -0.22], I <sup>2</sup> =29%, P<0.0001	11 (667)	
		Physical performance, sit to stand	SMD=0.35, 95% CI [0.14, 0.56]	8 (463)	
		Muscle strength	SMD=0.47, 95% CI [0.28, 0.65]	15 (968)	
		VO <sub>2</sub> peak	MD=1.76, 95% CI [0.82, 2.69]	6 (406)	
		Prevalence of depression	SMD=-0.23, 95% CI [-0.54, 0.08]	3 (195)	
		AET/RET VS. no exercise therapy	Diagnose-specific QoL	SMD=0.47, 95% CI [0.33, 0.62], I <sup>2</sup> =0%, P<0.00001	11 (807)

Table S5 (continued)

**Table S5** (continued)

SR/MA	Intervention measures	Outcomes	Synthesis of results	No. of studies (sample size)
	Football training VS. no exercise therapy	Diagnose-specific QoL	SMD=0.43, 95% CI [ 0.29, 0.58], P=0.64	1 (46)
Yang, B., <i>et al.</i> (2017)	Exercise VS. Usual care	CRF	SMD=-0.32, 95% CI [-0.45, -0.18], I <sup>2</sup> =35%, P<0.00001	9 (784)
		QoL	SMD=0.21, 95% CI [ 0.08, 0.34], I <sup>2</sup> =0%, P=0.002	10 (841)
Ying, M., <i>et al.</i> (2018)	Exercise VS. Usual care	QoL	SMD=0.17, 95% CI [ 0.00, 0.34], I <sup>2</sup> =0%, P=0.05	6 (554)
		Fatigue	SMD=0.17, 95% CI [ 0.00, 0.34], I <sup>2</sup> =0%, P=0.05	9 (737)
		Depression	SMD=-0.18, 95% CI [-0.67, 0.31], I <sup>2</sup> =46%, P=0.47	2 (163)
	Exercise + dietary advice VS. Usual care	QoL	SMD=0.45, 95% CI [-0.17, 1.08], I <sup>2</sup> =80%, P=0.15	3 (244)
	Lifestyle intervention VS. Usual care	Body composition	SMD=-0.1, 95% CI [-0.19, -0.01], I <sup>2</sup> =0%, P=0.03	
		LBM	SMD=-0.01, 95% CI [-0.24, 0.22], I <sup>2</sup> =0%, P=0.91	5 (292)
		Fat mass	SMD=-0.17, 95% CI [-0.39, 0.04], I <sup>2</sup> =0%, P=0.12	5 (322)
		The percentage of fat mass	SMD=-0.21, 95% CI [-0.40, 0.03], I <sup>2</sup> =0%, P=0.03	5 (393)
		Body weight	SMD=0.02, 95% CI [-0.17, 0.20], I <sup>2</sup> =1%, P=0.86	6 (480)
		BMI	SMD=-0.11, 95% CI [-0.32, 0.10], I <sup>2</sup> =9%, P=0.30	6 (452)

BMI, body mass index; LBM, lean body mass; BFM, body fat mass; BFR, body fat rate; VO<sub>2</sub>, oxygen consumption; HDL, high-density lipoprotein; BMD, bone mineral density; RET, resistance exercise training; AET, aerobic exercise training; MD, Mean differences; SD, standard deviation; SMD, Standard mean difference; ES, Cohen's d effect size; RM, Repetition maximum, to evaluate the load intensity of resistance exercise; 1RM is defined as the maximum load; 6RM is defined as the load that repeated six times to reach the maximum load; 6RM≈R5% of 1RM; 8RM≈80% of 1RM; 12RM≈67% of 1RM; CRF, Cancer-Related fatigue.