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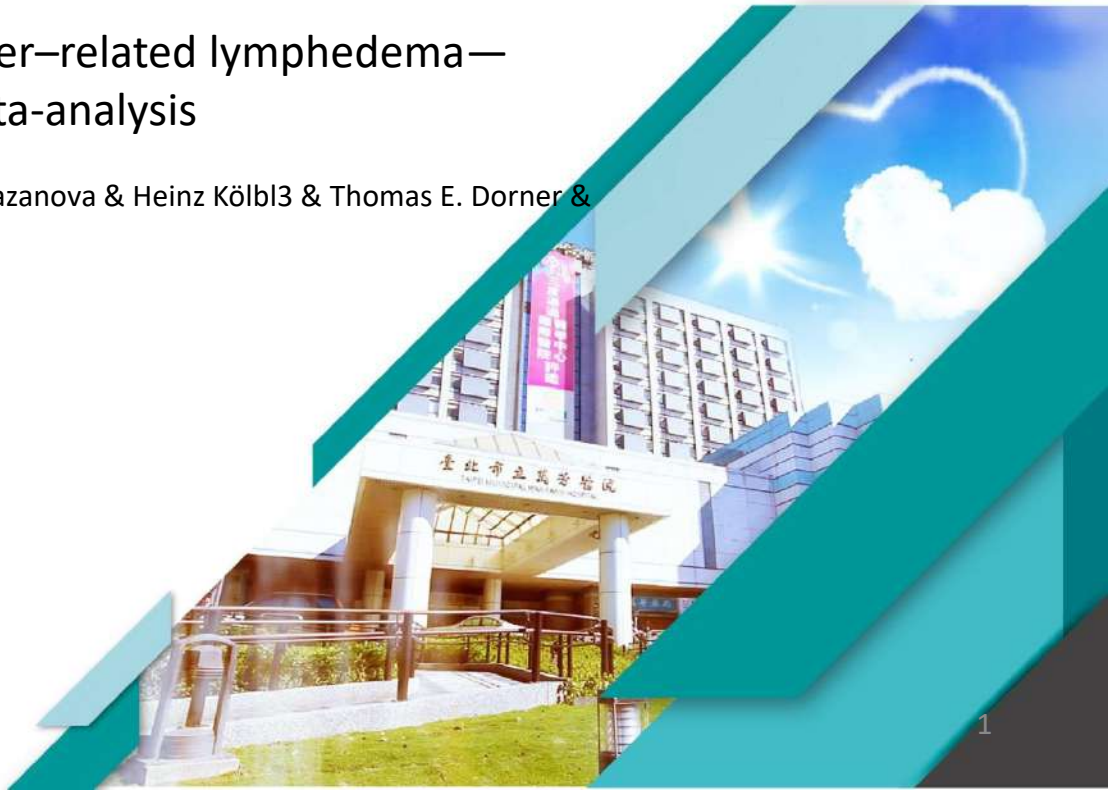
Taipei Municipal Wanfang Hospital (Managed by Taipei Medical University)

抗阻力訓練之介入是否可以改善乳癌患者淋巴水腫

Resistance exercise and breast cancer–related lymphedema—a systematic review update and meta-analysis

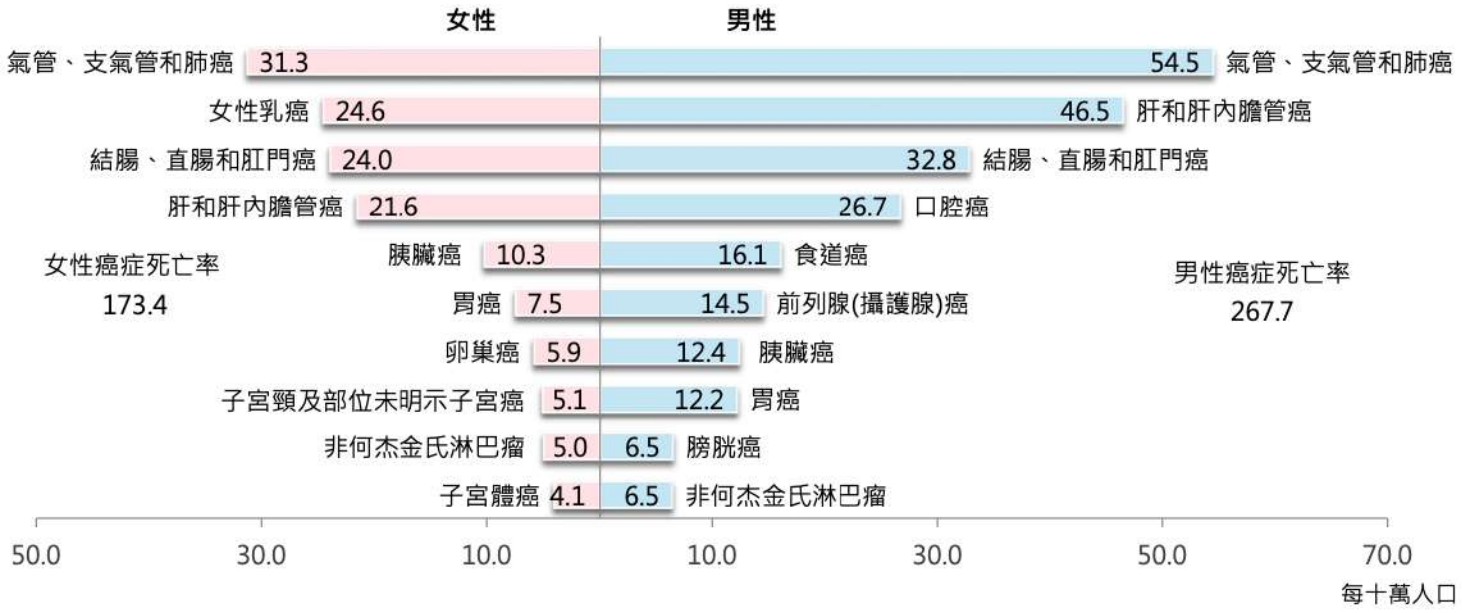
Timothy Hasenoehrl & Stefano Palma1 & Dariga Ramazanova & Heinz Kölbl3 & Thomas E. Dorner & Mohammad Keilani1 & Richard Crevenna



引言人：8A 病房 洪毓瑄
報告日期：2022.8.16

乳癌

- 根據衛福部110年統計男、女性之第一大癌症死因為肺癌，女性第二則為乳癌。



乳癌手術治療

- 手術治療為目前常見之乳癌治療方式，早期手術偏向於全部組織切除， 但發現切除組織越多，導致病患更易感染或產生併發症。
- 現今手術方式盡可能保留患者健康組織完整性，減少切除範圍。
- 依病人情況，可分改良式乳房切除術 、乳房保留、前哨淋巴腺切除術 、乳房切除術和腋下淋巴腺清除術。

(侯明鋒，2009)

Breast cancer-related lymphedema (BCRL)

- 乳癌術後上肢淋巴水腫患病率從24-49%不等，可能在術後立即出現或是在治療數年產生，大多是在術後18個月。
- 淋巴水腫是因為淋巴液過多堆積，並造成區域的腫脹，會增加感染、纖維化、皮膚改變、功能下降、體重增加，其他繼發性問題，如蜂窩性組織炎以及血栓形成。
- 20%的女性因乳癌治療而出現BCRL

(Kasawara et al., 2018)

Lymphedema測量方式

- 臂圍測量法 (circumferential measurements)

  使用皮尺於手臂上數點，測量其周徑並記錄

- 影像技術測量法(imaging techniques, perometry)

  紅外線掃瞄後，數據直接輸入電腦分析，準確了解肢體體積與周徑

- 排水量測量法(water displacement method)

  放入裝滿水的容器中，並記錄水溢出量

- dual X-ray absorptiometry (DXA)
- bioimpedance spectroscopy(BIS)

  身體通過微量電流，會因身體組織阻擋，產生阻力。組織中的水分越多，阻力就越小

BCRL相關復健治療

- 可分四個面向
  - 皮膚照護：避免產生皮膚破損，觀察皮膚，及早發現皮膚水腫。
  - 加壓治療：使用彈力繃帶、袖套、水中活動。
  - 淋巴引流：徒手按摩，促進淋巴流動。
  - 運動：可再分為幫浦運動、有氧運動、肌力、柔軟度訓練。

圖片引至:https://blog.xuite.net/otli2001/twblog （宋等，2019）

院內相關衛教單張

(一)上肢關節運動與伸展運動

- 術後第一天就可開始執行前臂、手腕及手指的關節運動。
- **術後一週內或當引流管拔除前，可開始進行主動的伸展運動，抬手不可超過肩膀高度，**

  拔除後可開始進行主動的伸展運動，持續運動 6~8 週，直至可達完全關節活動度為止。
- 術後 4~6 週可以開始進行阻力性的運動，從輕量級的運動開始(0.5~1 公斤重)。

※若運動過程中覺得傷口有撕裂劇性疼痛時，應暫停運動。

往前抬手臂

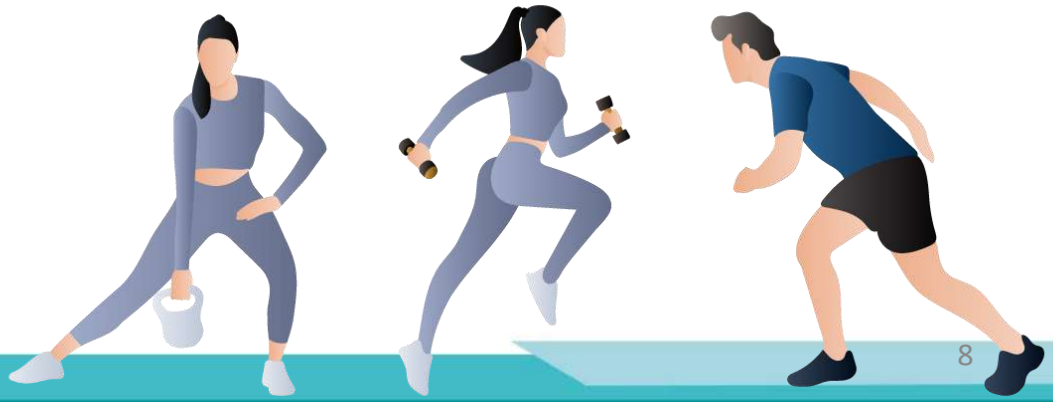
往側邊抬手

雙手放置脖子後方
手肘外展

雙手呈稍息姿勢
逐漸從屁股後方
移至腰部

動機

- 過去照護建議患肢不要劇烈、重複、過度的上肢運動，認為會加劇淋巴水腫問題，台灣相關研究以肩部活動、推牆運動等運動。
- 過去有幾篇文獻指出，抗阻力運動可減少淋巴水腫狀況。
- 是否可以給臨床人員多一項衛教指導，增加病人照護及生活品質。
- 臨床照護指引上，是否能加入相關運動衛教項目？



Journal : Supportive Care in Cancer

2021 JOURNAL IMPACT FACTOR

3.359

View calculation

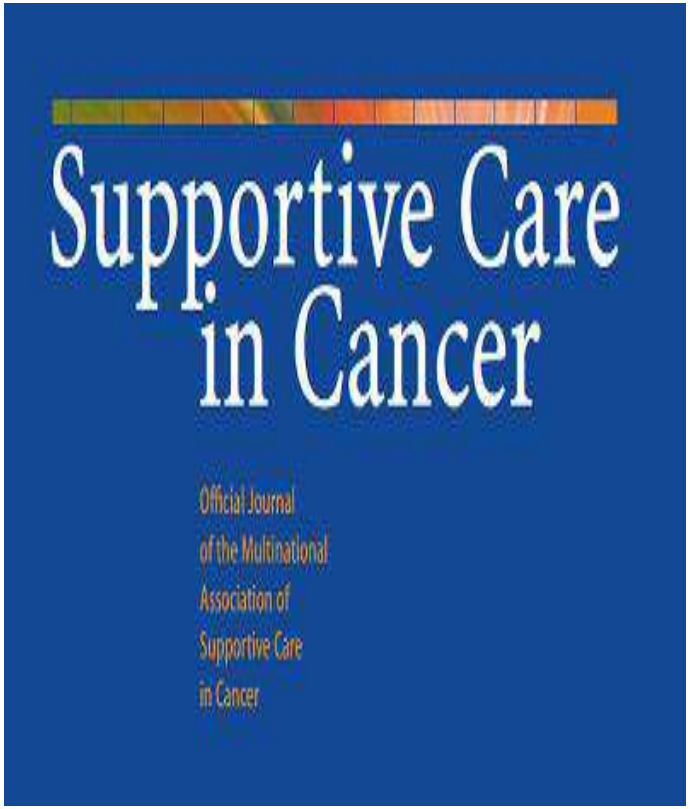
EDITION

Science Citation Index Expanded (SCIE)

CATEGORY

ONCOLOGY

164/245



JCR YEAR	JIF RANK	JIF QUARTILE	JIF PERCENTILE
2021	164/245	Q3	33.27

評讀工具 - FAITH

Resistance exercise and breast cancer–related lymphedema—a systematic review update and meta-analysis

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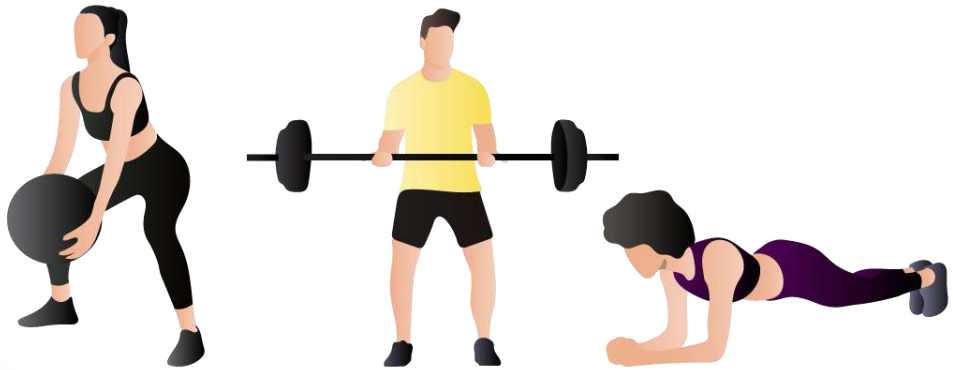

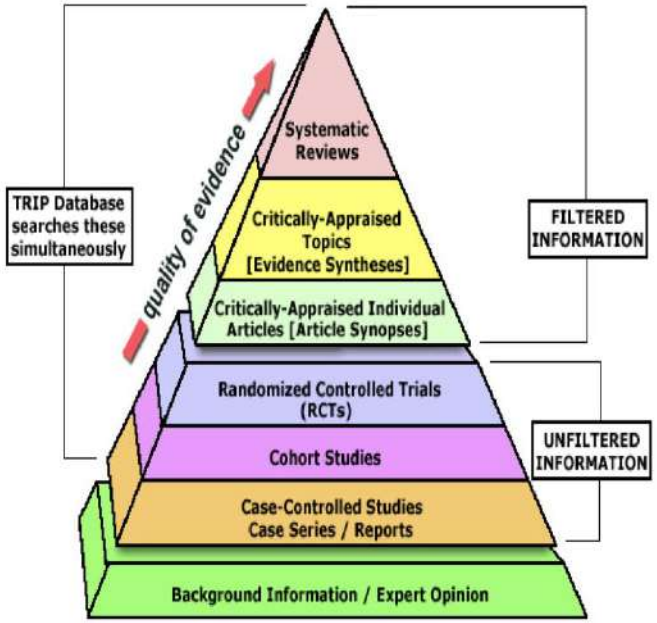

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步驟一

系統性文獻回顧探討的問題為何？

PICO

問題類型

●治療型

○預後型

○診斷型

○傷害型

Population/Problem
Breast cancer patient with lymphedema

Intervention
Resistance exercise

Comparison
Without resistance exercise

Outcomes
Upper-limb edema condition

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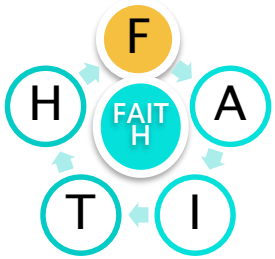
步驟二

系統性文獻回顧的品質如何？

F 研究是否找到所有相關證據



A systematic literature review was conducted using the scientific databases PubMed, Embase, and MEDLINE between 1966 and 31st January 2020. The search strategy included the search terms "lymphedema," "lymphoedema" AND "breast cancer" AND "resistance exercise," "resistance training," "strength exercise," "weight training," "weight lifting," and their possible variations. Any exercise intervention studies—both randomized controlled and uncontrolled—which assessed the effects of RE on BCRL in BCS in at least one intervention group published between 1966 and 31st January 2020 and followed or exceeded the RE intensity recommendations of the American College of Sports Medicine (ACSM) for BCS [16, 17] were considered. Moreover, assessment of the BCRL with any assessment technique and English language were deemed mandatory for being considered for inclusion. During the systematic literature research, 747 arti- therefore included in the systematic review [18–46]. An overview over the selection process is presented in Supplementary Fig. 1. The process of systematic literature review as well as selection of suitable articles was conducted independently by two experienced researchers following the PRISMA reporting guidelines for systematic reviews and meta-analyses [47].

資料庫搜尋：

PubMed.Embase.MEDLINE

搜尋年份：1966-2020間

語言：英文文獻

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評讀結果

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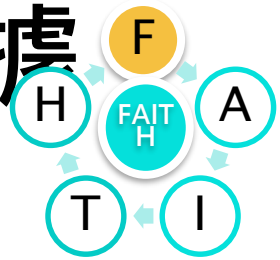
F 研究是否找到所有相關證據



納入條件

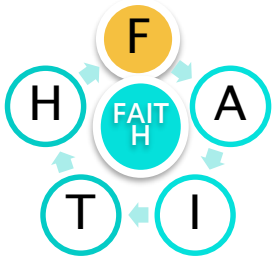
search terms “lymphedema,” “lymphoedema” breast cancer” “resistance exercise,” “resistance training,” “strength exercise,” “weight training,” “weight lifting,” and their possible variations.

排除條件

非RCT . Uncontrolled

沒有運動介入

F 研究是否找到所有相關證據



Literature search
Databases:
PubMed, EMBASE, MEDLINE
Articles published between 1966 and January 31st 2020
Search results: 747

Excluded: 701
- Unfitting field of research: 77
- Review/meta-analysis: 55
- Protocol/design/pilot: 9
- Case report/feasibility study: 3
- Conference paper/editorial/comment: 30
- Training/clinical guidelines: 4
- Wrong language: 1
- Multiple search results: 522

Fulltext-analysis: 46
Excluded: 19
- Unfitting aim: 4
- Uncontrolled trial: 2
- Not following ACSM exercise guidelines for cancer survivors: 2
- Insufficient info about RE: 2
- LE of the leg: 1
- No Focus on LE: 4
- Pilot, feasibility study, project report, descriptive study: 4

Fulltext-analysis from reference lists: 3
Excluded: 1
- Design/protocol: 1

Included articles: 29
- Independent trials: 22
- Additional articles: 7

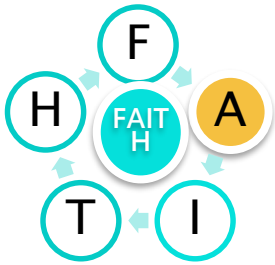
PRISMA

提及排除及納入條件

排除案例報告、protocol、主題不符...

共29篇文章符合納入標準

A 文獻是否經過嚴格評讀



As the current article is a review update of former systematic reviews [11, 12] and exactly the same search strategy and inclusion as well as exclusion criteria were applied, the main focus of the systematic review was on the articles published since 30th September 2017, the end of the last literature search [11]. Six new articles were found [41–46] which were introduced to risk of bias analysis. Five of those articles were randomized studies [41–44, 46] and were therefore assessed with the current risk of bias tool for randomized trials of the Cochrane collaboration, the RoB 2 [48]. The sixth one, Luz et al. [45], however, was a nonrandomized trial. Therefore, the risk of bias analysis for this study was undertaken with the Risk Of Bias In Non-randomized Studies of Interventions (ROBINS-I) tool of the Cochrane collaboration [49].

- 兩位作者獨立進行文獻評讀，未提及若意見不符狀況是否有第三人意見
- 六篇文章使用risk of bias analysis
- 五篇研究隨機對照試驗，使用ROB2評讀工具
- 一篇為非隨機研究，使用ROBINS I 評讀工具

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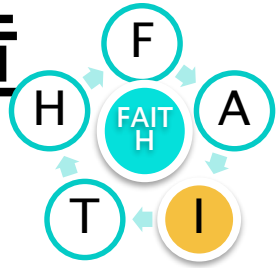
評讀結果
●是○否○不清楚

I 是否納入具良好效度文章



Study	Level of evidence	Study design
Ammitzbøll et al. [41]	1b	Randomized controlled trial
Bloomquist et al. [42]	1b	Randomized, crossover, equivalence trial
Bloomquist et al. [43]	1b	Randomized controlled trial
Luz et al. [45]	2b	Controlled clinical trial
Omar et al. [44]	1b	Single-blinded randomized controlled trial
Schmitz et al. [46]	1b	Randomized controlled clinical trial

使用OCEBM LEVEL of Evidence

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I 是否納入具良好效度文章

	Bias due to confounding	Bias in selection of participants into the study	Bias in classification of interventions	Bias due to deviations from intended interventions	Bias due to missing data	Bias in measurement of outcomes	Bias in selection of the reported result	Overall bias
Luz et al. (2018)[45]	Serious*	Low	Low	Low	Low	Moderate**	Low	Serious

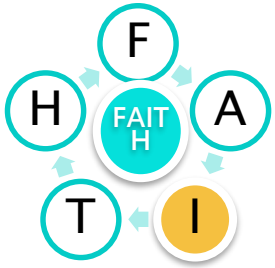
Explanation:
* BMI and lymphedema stage were different between the intervention groups at baseline
** The outcome assessors aware of the intervention received; outcome measure could have been influenced by knowledge of the intervention received

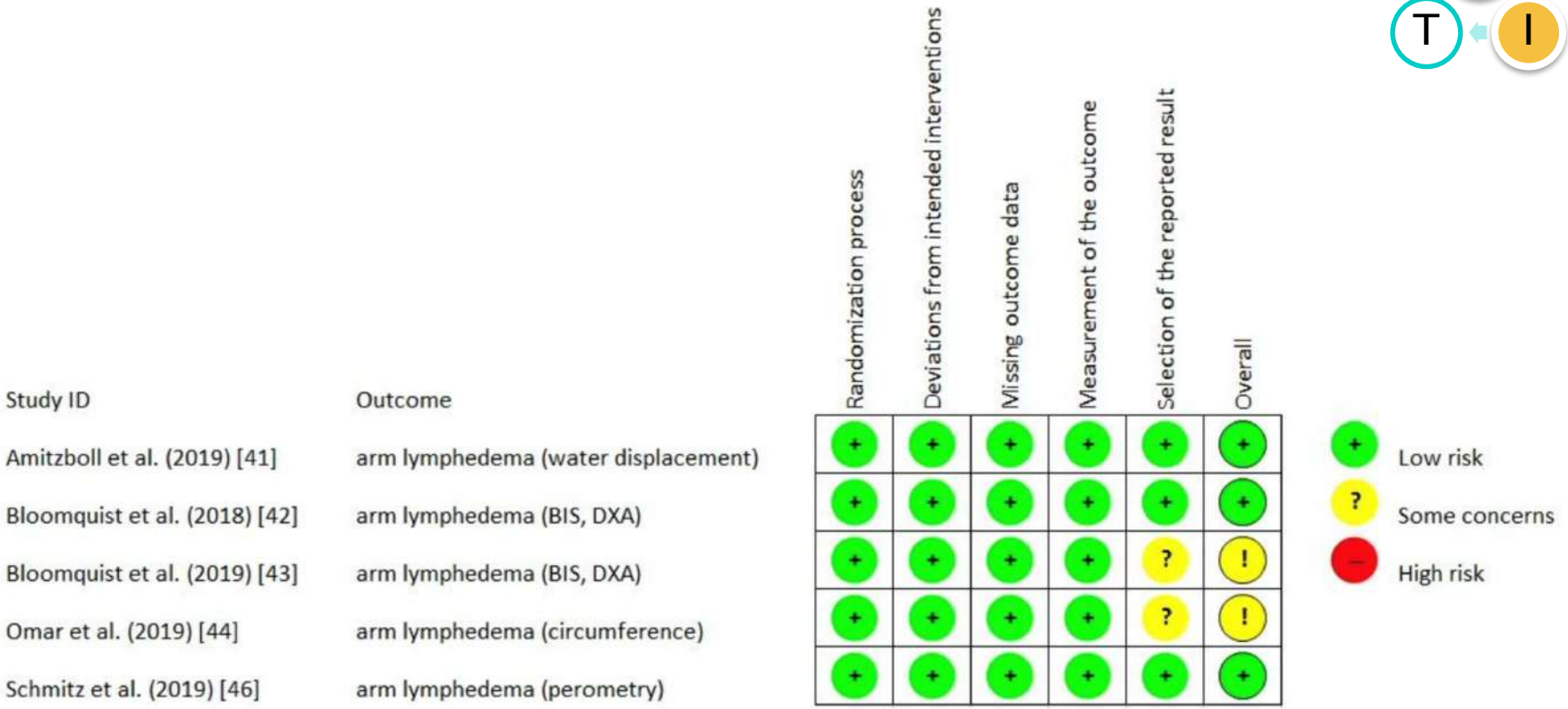
Supplementary Table 1. Risk of bias assessment of the included non-randomized study (Luz et al., 2018) [45]

使用ROBINS-I文獻評讀工具

評讀結果
●是○否○不清楚

I 是否納入具良好效度文章





使用Cochrane Risk of Bias(RoB)文獻評讀工具

評讀結果
●是○否○不清楚

Table 2 Patient details, lymphedema status, and exercise details of the independent studies published since September 2017 and details of previous studies published in Hasenoehrl et al. [11] and Keilani et al. [12]

Study	Year	Sample	Patient details/LE status	Exercise duration, frequency, intensity	Exercise details	Compression during RE
Ammitzbøll et al. [41]	2019	32 PRE: $n = 16$ Cont: $n = 16$	Patients undergoing BCa surgery with axillary lymph node dissection	*Duration*: 50 weeks: 20 weeks supervised + 30 weeks self-administered *Frequency*: 3 times/week *RE intensity*: Progressing from 25 RM to 10–12 RM	*Sets*: 2–3 *Rep/set*: Weeks 1–4: 15–20 repetitions at the 25 RM, 2–3 sets Weeks 5–8: 15–17 repetitions at the 20 RM, 3 sets Weeks 9–12: 10–12 repetitions at the 15 RM, 3 sets Weeks 13–50: 10–12 repetitions at the 10–12 RM *Muscle groups*: Major muscle groups for upper limb, lower limb, and core *Exercises used*: Minimum of six exercises per session: three for the upper body, one for the lower body, and two for the core	Yes, if deemed necessary
Bloomquist et al. [42]	2018	18 in cross-over design RE-HL: $n = 18$ RE-LL: $n = 17$	Women receiving standard adjuvant chemotherapy for stage I–III BCa	*Duration*: 2 single sessions over 2 weeks *Frequency*: 1 RE session – 7 days washout – 1 RE session *RE intensity*: RE-HL: 85–90% 1RM RE-LL: 60–65% 1RM	*Rep/set*: RE-LL: 2 sets of 15–20 repetitions RE-HL: 3 sets of 5–8 repetitions *Exercises/muscle groups*: Chest press, latissimus pulldown and triceps extension with exercise machines, biceps curls with free weights	No

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Bloomquist et al. [43] Additional information derived from Bloomquist et al. [43]	2019	153 High: $n = 75$ Low: $n = 78$	Physically inactive women receiving adjuvant chemotherapy for BCa	*Duration*: 12 weeks *Frequency*: 3 times/week *RE intensity*: High: 85–90% 1RM Low: no RE	*Rep/set*: High: Weeks 1–6: RE + AE + relaxation + massage Week 1: 8–12 repetitions at 70% 1RM, 2–3 sets Week 2: 8–12 repetitions at 80% 1RM, 2–3 sets Weeks 3–12: 5–8 repetitions at 80–90% 1RM, 2–3 sets Weeks 7–12: RE + AE + ballgames + dancing *Exercises/muscle group*: Major muscle groups of the body: leg press, chest press, latissimus pull down, abdominal crunch, lower back and knee extension Low: walking + health consultation	No information
Luz et al. [45]	2018	42 CPT: $n = 22$ CPT + ST: $n = 20$	BCS diagnosed with LE resulting from unilateral surgery for BCa treatment	*Duration*: 8 weeks *Frequency*: 2 times/week *RE intensity*: CPT: no RE CPT + ST: 40% 1RM	*Rep/set*: CPT: therapeutic exercises CPT+ST: Week 1: 10 repetitions, 2 sets Week 2: 10 repetitions, 3 sets Weeks 3–8: 15 repetitions, 3 sets *Exercises/muscle groups*: Shoulder abduction, elbow extension, external and internal rotation with resistance band, protraction/retraction of the shoulder blades with a stick, shoulder flexion and abduction, elbow flexion, fist flexion and extension with a sling, ball pressing and moving	Yes, part of the CPT
Omar et al. [44]	2019	70		*Duration*: 8 weeks	*Rep/set*:	

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Table 2 (continued)

Study	Year	Sample	Patient details/LE status	Exercise duration, frequency, intensity	Exercise details	Compression during RE
		RE + comp: $n = 35$ RE: $n = 35$	Women with unilateral BCRL and ≥ 5% of interlimb differences of volume or circumference	*Frequency*: 3 times/week *RE intensity*: 50–60% est1RM	10–12 repetitions, 2–3 sets *Exercises/muscle groups*: Dumbbell fly, triceps extension, biceps curl up, one-arm bent over row, dumbbell sides rise, lifting the arm forward, and wrist curls with dumbbells	Yes, depending on personal preference
Schmitz et al. [46] Additional information derived from Winkels et al. [51]	2019	351 Cont: $n = 90$ Exerc: $n = 87$ Weight loss: $n = 87$ Exerc + weight loss: $n = 87$	Overweight BCS with BCRL	*Duration*: 52 weeks *Frequency*: 2 times/week *RE intensity*: no information	*Rep/set*: Exerc and exerc + weight loss Weeks 1–6: 1 supervised session (exercise instruction) + 1 unsupervised Weeks 1–4: 10 repetitions, 2 sets Weeks 7–52: 2 home-based exercise sessions, 1 weekly support telephone call + 1 monthly in-person class Weeks 5–52: 10 repetitions, 3 sets *Exercises/muscle groups*: Chest-presses, squats on a chair, one-arm rowing exercise, side-raises, step-ups, kickbacks, split-leg lunges, side lunges, and bicep curls with adjustable dumbbells + core training exercises of abdominal and lower back muscles (1 stabilization, 1 flexion, and 1 extension core exercise)	Yes

AE aerobic exercise, *BCa* breast cancer, *BCRL* breast cancer related lymphedema, *BCS* breast cancer survivor, *Comp* compression, *Cont* control group, *CPT* complex physical therapy, *est1RM* estimated 1-repetition-maximum, *Exerc* exercise, LE lymphedema, *PRE* progressive resistance exercise, *Rep/set* repetitions per set, *RE* resistance exercise, *RE-LL* low load resistance exercise, *RE-HL* high load resistance exercise, *ST* strength training, [illegible]-maximum

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Table 3 Lymphedema assessment, measurement details, and outcomes of the 6 newly included articles [41–46] published since September 2017 and details of previous studies published in Hasenoehrl et al. [11]

Author	Lymphedema assessment	Measurement details	Results
Ammitzbøll et al. [41]	Water displacement DXA	No measurement details Lymphedema was defined as a > 3% increase in ILVD. Measured outcome: ILMD Separate arm scans analyzed with Small Animal Program software (version 8.1027). In the subgroup of one study center ($n = 77$)	No significant mean change in ILVD No significant mean change in ILMD
Bloomquist et al. [42]	BIS DXA	Impedance of the extracellular fluid in the affected and nonaffected arms was assessed and compared (L-Dex score). Tissue composition and arm volume using a three-compartment model that is sensitive to changes in upper extremity tissue composition Using previously derived densities for fat (0.9 g mL^{-1}), lean mass (1.1 g mL^{-1}), and bone mineral content (1.85 g mL^{-1}), DXA measurements were converted into estimated arm volumes.	Predetermined equivalence margin of ± 3.0 units: Equivalence between intensities was observed immediately after and 24 h after RE sessions. At 72 h post-RE session, equivalence could not be declared (lower CI exceeded − 3.0) favoring heavy load RE. Equivalence between intensities was observed at all time points for interlimb volume percent differences.
Bloomquist et al. [43]	DXA BIS	Equal to Bloomquist et al. [42] Equal to Bloomquist et al. [42] From participant 71 forward ($n = 81$)	Predetermined equivalence margin of ± 3.0 units: Nonequivalence was observed at all time points for interarm volume % differences favoring the HI-RE group. Equivalence between groups at 12 and 39 weeks. Equivalence to the predetermined equivalence margin at 12 weeks (per-protocol analysis) Nonequivalence to the predetermined equivalence margin at 39 weeks (upper CI exceeded 3.0) favoring the HI-RE group

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Luz et al. [45]	Arm circumference	Measurement sites: • 14 and 7 cm above the olecranon • Circumference of the olecranon • 7, 14, and 21 cm below the olecranon • Circumference of the dorsum and palm, at the line of the metacarpals at the base of the fingers Further details: • Limb volume was calculated with the formula: $V = h(C_1^2 + C_1C_2 + C_2^2)/(12\pi)$ [52] • V is the volume of the limb segment, C and c are the circumferences at each end, and h is the distance between the circumferences (C).	Between group change in arm volume not significant Within-group change showed decreased values in both RE groups (no level of significance reported).
Omar et al. [44]	Arm circumference	Measurement sites: • Circumference was taken at the levels of metacarpal and wrist, and at 4-cm intervals up the arm until the base of the axilla for both affected and unaffected limbs Further details: • Limb volume was calculated with the formula: $V = h(C_1^2 + C_1C_2 + C_2^2)/(12\pi)$ [52]	At the end of treatment (week 8), the ELV and %ELV decreased significantly in both groups. These reductions were sustained to follow-up (week 12). No significant changes in the relative volume (% reduction ELV) were observed between groups at the end of treatment (week 8) or at follow-up (week 12).
Schmitz et al. [46]	Arm volume (perometry)	Outcome measure: percentage of interlimb volume differences	No between-group differences were noted at baseline or in 12-month changes in percentage or absolute interlimb differences. Individual limb decreases across 12 months were larger for both affected and unaffected limbs in the weight loss and combined intervention groups compared with the control group.

BIS bioimpedance spectroscopy, *CI* confidence interval, *DXA* dual X-ray absorptiometry, *ELV* excess limb volume, *HI* high intensity, *ILMD* interlimb mass difference, *ILVD* interlimb volume difference, *RE* resistance exercise

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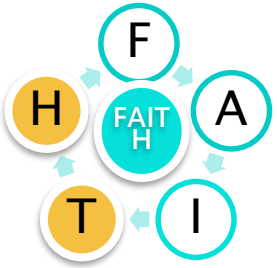
T作者是否以表格和圖表試驗結果
H研究結果異質性是否相近



Meta-analyses of lymphedema (BIS)

After thorough analysis of the reported LE data in all included studies, the results of six RE intervention studies [20, 21, 30, 33, 42, 43] could be pooled for a meta-analysis. All of those studies assessed BCRL with BIS and reported L-Dex values. Test for heterogeneity was not significant, and therefore, homogeneity between the studies can be assumed ($Q(df = 11) = 10.7104$, $p = 0.4678$). The mean differences as well as their standard errors are presented in Supplementary Table 2. As indicated in Fig. 1, RE was associated with a significant decrease in L-Dex values (95% CI − 1.10 [− 2.19, − 0.01]). The funnel plot for BIS showed no sign of publication bias (Supplementary Fig. 3).

以 **bioimpedance spectroscopy （BIS）**測量方式

(Q(df = 11) = 10.7104, p = 0.4678)

Cochran Q/df < 1 ---異質性不顯著，假設為同質

RE與L-Dex呈顯著差異

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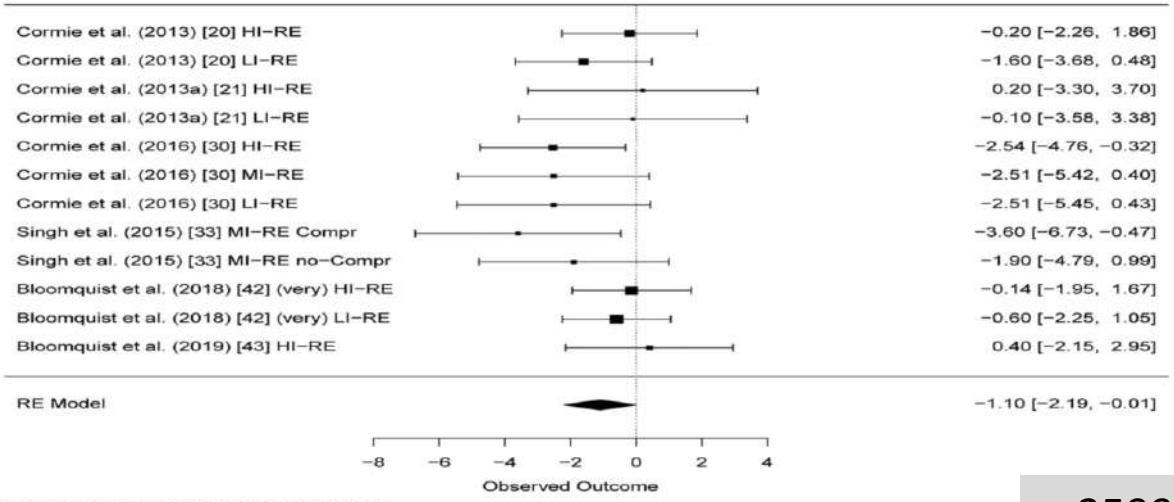

Fig. 1 Forest plot bioimpedance spectroscopy (BIS)

評讀結果
○是○否●不清楚

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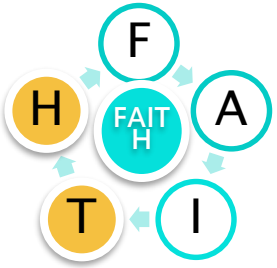
T作者是否以表格和圖表試驗結果
H研究結果異質性是否相近



Meta-analyses of upper extremity strength

After thorough analysis of the reported strength data in all included studies, the results for upper extremity strength (chest press) could be pooled from six studies [18, 20, 22, 25, 32, 43]. Test for heterogeneity of upper extremity strength was significant which implies heterogeneity between the studies ($Q(df = 7) = 275.37$, $p < 0.0001$). The mean differences as well as their standard errors are presented in Supplementary Table 3. The meta-analysis model for upper extremity strength showed significant higher strength values after RE (95% CI 8.96 [3.42, 14.51]) (Fig. 2). The funnel plot for upper extremity strength showed no sign of publication bias as the observed outcome is evenly distributed around the average (Supplementary Fig. 4).

以 **upper extremity strength** 測量

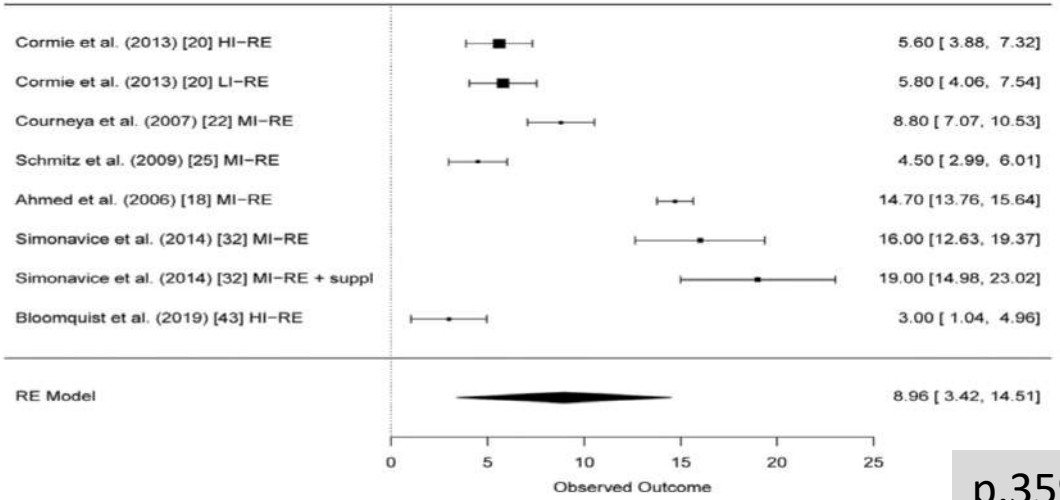
RE後上肢肌力顯著提升

(Q(df = 7) = 275.37, p < 0.0001)

Cochran Q/df ＞ 1 ---異質性

p.3595

Fig. 2 Forest plot upper extremity strength (chest press)



評讀結果
●是○否○不清楚

p.3599

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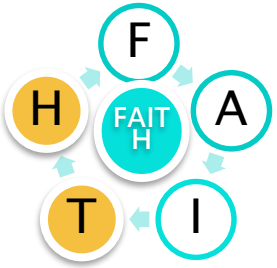
-委託財團法人臺北醫學大學辦理-

T作者是否以表格和圖表試驗結果
H研究結果異質性是否相近



Meta-analyses of lower extremity strength

After thorough analysis of the reported strength data in all included studies, the results for lower extremity strength (leg press and extension) could be pooled from six studies [18, 20, 22, 25, 32, 41]. Test for heterogeneity of upper extremity strength was significant which implies heterogeneity between the studies ($Q(df=7)=560.423$, $p<0.0001$). The mean differences as well as their standard errors are presented in Supplementary Table 4. The meta-analysis model for lower extremity strength showed significant higher strength values after RE (95% CI 23.42 [11.95, 34.88]) (Fig. 3). The funnel plot for lower extremity strength showed no sign of publication bias as the observed outcome is evenly distributed around the average (Supplementary Fig. 5).

以 **lower extremity strength** 測量

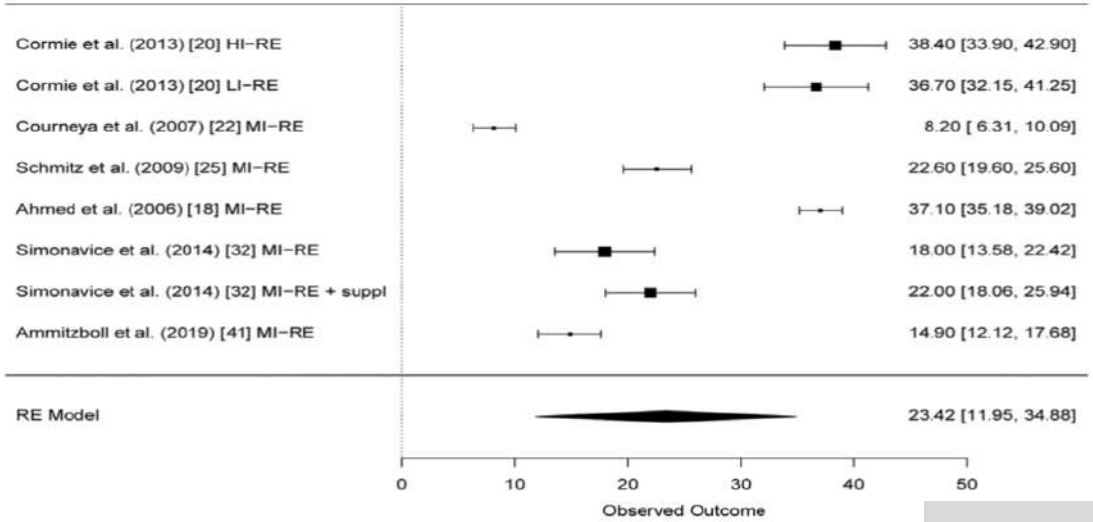
RE後下肢肌力顯著提升

(Q(df = 7) = 560.423, p < 0.0001)

Cochran Q/df ＞ 1 ---異質性

p.3597

Fig. 3 Forest plot lower extremity strength (leg press and extension)



評讀結果
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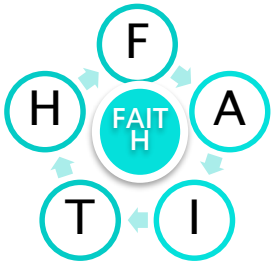
FAITH 綜整



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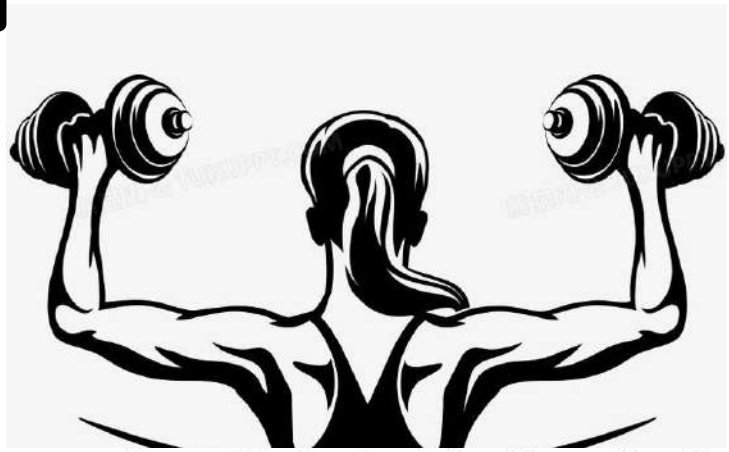
NO					
UN CLEAR	●				

步驟三

研究結果為何？

結論



To our knowledge, this is the first time that a meta-analysis pooled homogeneous BCRL outcome measures of five or more RE intervention trials with BCS. The results of this meta-analysis suggest that RE has a significant positive effect on BCRL in BCS. In the year 2000, Harris and Niesen-

p.3597

However, those results need to be treated with caution for several reasons. First, the pooled BIS results might have been homogeneous regarding outcome assessment, but unfortunately, they were not regarding study protocol and therefore measurement times. While four of the studies were assessing acute responses of the BCRL [21, 30, 33, 42], the two others were assessing chronic responses [20, 43]. We can therefore not differentiate between short-term and long-term responses. The average effect, however, is significant.

抗阻力訓練介入對淋巴水腫是有顯著改善的

其中急性/慢性淋巴水腫個案都有顯著改善

限制

p.3600

The following limitations of the study have to be taken into account: First, as already mentioned, the BIS results of this meta-analysis might have been homogeneous regarding the LE assessment method but are heterogeneous regarding measurement time as well as exercise intensities. However, this form of heterogeneity of the studies used for the meta-analysis was representative for the entirety of the published literature. And second, those papers which could be utilized to show the pooled effect for upper and lower extremity strength were only partially the same papers which were used for the pooled BCRL analysis. BCRL and strength results from one and the same paper were meta-analyzed only of two studies [20, 43].

1.在測量時間和運動強度方面，存在差異性

2. 顯示上肢和下肢力量合併效應的文章，僅部分與用於合併 BCRL 分析的文章相同。

Third, the studies did not differentiate between patients who underwent sentinel lymph node dissection and those who received full axillary dissection. As the surgery technique and, therefore, the number of residual axillary lymph nodes might be decisive factors for the efficacy of RE on the lymphatic drainage, this differentiation should be considered in future research.

RE groups [30, 33] to high intensity RE groups [20, 21, 30, 43] and even one very high intensity RE group [42]. We are therefore not able to differentiate between different RE intensities but on the other hand get a result which is representative for the heterogeneity of RE interventions in practice.

And fifth, the assessment technique BIS might be able to measure a patient's total body water as well as extracellular and intracellular fluid volumes, but cannot differentiate between arm LE and arm muscle mass [53, 54]. This is

p.3599

分享

Review Article

The possibility of the use of Kinesio Taping in internal, oncologic, and neurologic diseases: A systematic review and meta-analysis

Marcin Krajczy[a,b], Edyta Krajczy[b], Katarzyna Bogacz[a], Jacek Łuniewski[a,*], Danuta Lietz-Kijak[c], Jan Szczegielniak[a]

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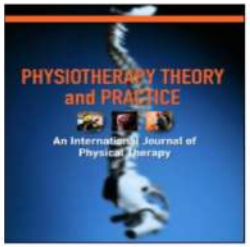

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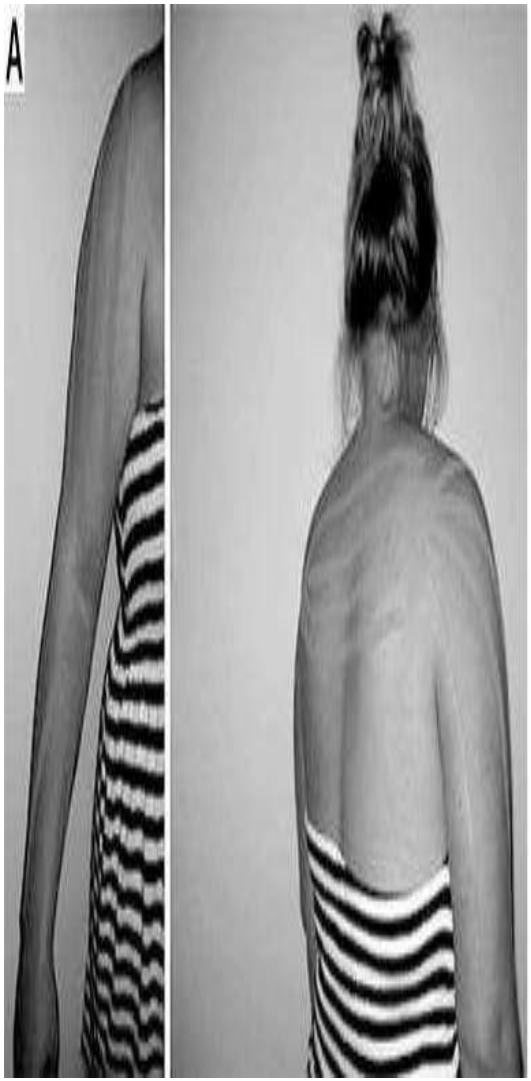
Effects of Kinesio Taping on breast cancer-related lymphedema: A meta-analysis in clinical trials

Karina Tamy Kasawara, Jéssica Monique Rossetti Mapa, Vilma Ferreira, Marco Aurélio Nemitalla Added, Silvia Regina Shiwa, Nelson Carvas Jr & Patricia Andrade Batista



(Malicka et al., 2014)

議題討論

是否建議使用抗阻力訓練改善

乳癌術後水腫情形？

同意 1票

待評估 16票

不同意 1票

THANK YOU!