Rehabilitation with nutrition management for cancer in outpatients: Systematic review protocol

* Review title.

Rehabilitation with nutrition management for cancer in outpatients

* Anticipated or actual start date.

12/07/2020

* Anticipated completion date.

31/09/2020

* Named contact.

Ryo Momosaki

* Named contact email.

momosakiryo@gmail.com

* Review team members and their organisational affiliations.

Dr Yuu Tanaka. Nara Medical University

Dr Mika Sonoi. Okayama university Hospital

Dr Ryo Momosaki. Mie University

Mr Eiji Kose. Teikyo University

Yuya Suzuki. Steel Memorial Yahata Hospital

Chieko Suzuki. Ajisu Kyoritsu Hospital

Mariko Nakamichi. Haradoi Hospital

Tatsuro Inoue. Niigata University of Health and Welfare

* Funding sources/sponsors.

Each members receive salary from their affiliation

* Conflicts of interest.

None

* Collaborators.

Professor Masahiko Kawavguchi. Department of Anesthesiology of Nara Medical University

Ms Takaaki Suzuki. Nara Medical University Library

* Review question.

Does rehabilitation with nutrition management give effect of improving QoL or ADL of out patients with cancer

* Searches.

We will search MEDLINE, the Cochrane Central Register of Controlled Trials (CENTRAL), EMBASE, and the Ichushi-Web (covering January 1980 to May 2020)

* Search strategy.

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| Embase |  |
| Set# | Searched for |
| S1 | ((TI,AB(cancer) OR TI,AB(cancers) OR TI,AB(oncolog\*))) |
| S2 | EMB.EXACT.EXPLODE("neoplasm") |
| S3 | (S1 OR S2) |
| S4 | (TI,AB(ambulatory) OR TI,AB(outpatient\*) OR TI,AB(home)) |
| S5 | (EMB.EXACT.EXPLODE("ambulatory care") OR EMB.EXACT.EXPLODE("outpatient") OR EMB.EXACT.EXPLODE("outpatient care") OR EMB.EXACT.EXPLODE("home care")) |
| S6 | (S4 OR S5) |
| S7 | (TI,AB(patient) OR TI,AB(patients)) |
| S8 | EMB.EXACT.EXPLODE("patient") |
| S9 | (S7 OR S8) |
| S10 | (S3 AND S6 AND S9) |
| S11 | ((EMB.EXACT.EXPLODE("artificial feeding") OR EMB.EXACT.EXPLODE("diet therapy") OR EMB.EXACT.EXPLODE("enterostomy") OR EMB.EXACT.EXPLODE("lipid emulsion") OR EMB.EXACT.EXPLODE("elemental diet") OR EMB.EXACT.EXPLODE("gastrostomy") OR EMB.EXACT.EXPLODE("nutritional disorder") OR EMB.EXACT.EXPLODE("protein hydrolysate") OR EMB.EXACT.EXPLODE("nutritional support") OR EMB.EXACT.EXPLODE("nutritional requirement") OR EMB.EXACT.EXPLODE("dietary intake") OR EMB.EXACT.EXPLODE("diet supplementation"))) |
| S12 | ((TI,AB(alimentation) OR TI,AB(branched chain amino acids) OR TI,AB(BCAA) OR TI,AB(dietary NEAR disorder\*) OR TI,AB(dietary NEAR protein\*) OR TI,AB(dietary NEAR supplement\*) OR TI,AB(energy NEAR intake) OR TI,AB(enteral NEAR nutrition) OR TI,AB(enterostom\*) OR TI,AB(fat NEAR emulsion) OR TI,AB(formulated NEAR food\*) OR TI,AB(gastrostom\*) OR TI,AB(hyperalimentation\*) OR TI,AB(hypocaloric NEAR alimentation\*) OR TI,AB(hypocaloric NEAR nutrition) OR TI,AB(intragastric NEAR feed\*) OR TI,AB(intragastric NEAR nutrition) OR TI,AB(nutrition) OR TI,AB(nutrition NEAR diseases) OR TI,AB(nutrition NEAR disorders) OR (nutritional NEAR intervention\*) OR TI,AB(nutritional NEAR requirement\*) OR TI,AB(nutrition NEAR supplement\*) OR TI,AB(nutritional NEAR support) OR TI,AB(parenteral NEAR nutrition) OR TI,AB(percutaneous NEAR endoscopic NEAR gastrostom\*) OR TI,AB(peripheral parenteral nutrition) OR TI,AB(permissive NEAR underfeeding) OR TI,AB(post-pyloric NEAR feeding) OR TI,AB(post-pyloric NEAR nutrition) OR TI,AB(protein NEAR hydrolysate) OR TI,AB(supplemental NEAR feed\*) OR TI,AB(total parenteral nutrition))) |
| S13 | (S11 OR S12) |
| S14 | (EMB.EXACT.EXPLODE("rehabilitation") OR EMB.EXACT.EXPLODE("exercise") OR EMB.EXACT.EXPLODE("physiotherapy") OR EMB.EXACT.EXPLODE("mobilization") OR EMB.EXACT.EXPLODE("walking") OR EMB.EXACT.EXPLODE("nursing care")) |
| S15 | (TI,AB(rehabilitation) OR TI,AB(exercise\*) OR TI,AB(training) OR TI,AB(physical NEAR therapy) OR TI,AB(kinesiotherapy) OR TI,AB(mobilization) OR TI,AB(walking) OR TI,AB(ambulation) OR TI,AB(nursing NEAR care) OR TI,AB(workout)) |
| S16 | (S14 OR S15) |
| S17 | (S10 AND S13 AND S16) |
| S18 | (EMB.EXACT.EXPLODE("randomized controlled trial (topic)") OR EMB.EXACT.EXPLODE("randomized controlled trial") OR EMB.EXACT.EXPLODE("controlled clinical trial (topic)") OR EMB.EXACT.EXPLODE("controlled clinical trial") OR TI,AB(randomized) OR TI,AB(placebo) OR QU(DT) OR TI,AB(randomly) OR TI,AB(trial) OR TI,AB(groups)) |
| S19 | (S17 AND S18) |
| S20 | (ANIMAL(YES) NOT HUMAN(YES)) |
| S21 | (S19 NOT S20) |
| S22 | (EMB.EXACT.EXPLODE("child") NOT EMB.EXACT.EXPLODE("adult")) |
| S23 | (S21 NOT S22) |

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| Pubmed |  |
| #1 | Search cancer[tiab] OR cancers[tiab] OR oncolog\*[tiab] OR "Neoplasms"[mh] |
| #2 | Search ambulatory[tiab] OR outpatient\*[tiab] OR home[tiab] OR "Outpatients"[mh] OR "Ambulatory Care"[mh] OR "Home Nursing"[mh] |
| #3 | Search patient[tiab] OR patients[tiab] OR "Patients"[mh] |
| #4 | Search #1 and #2 and #3 |
| #5 | Search ("Rehabilitation"[mh]) OR ("Exercise"[mh]) OR ("Physical Therapy Modalities"[mh]) OR ("Early Ambulation"[mh]) OR ("Walking"[mh]) OR ("Nursing Care"[mh]) OR rehabilitation[tiab] OR exercise\*[tiab] OR training[tiab] OR (physical therapy[tiab]) OR kinesiotherapy[tiab] OR mobilization[tiab] OR walking[tiab] OR ambulation[tiab] OR (nursing care[tiab]) OR workout[tiab] |
| #6 | Search ("Feeding Methods"[mh]) OR ("Nutrition Therapy"[mh]) OR ("Enterostomy"[mh]) OR ("Fat Emulsions, Intravenous"[mh]) OR ("Food, Formulated"[mh]) OR ("Gastrostomy"[mh]) OR ("Nutrition Disorders"[mh]) OR ("Protein Hydrolysates"[mh]) OR ("Nutritional Support"[mh]) OR ("Nutritional Requirements"[mh]) OR ("Energy Intake"[mh]) OR ("Dietary Proteins"[mh]) OR ("Dietary Supplements"[mh]) OR alimentation[tiab] OR "branched chain amino acids"[tiab] OR BCAA[tiab] OR (dietary disorder\*[tiab]) OR (dietary protein\*[tiab]) OR (dietary supplement\*[tiab]) OR (energy intake[tiab]) OR (enteral nutrition[tiab]) OR enterostom\*[tiab] OR (fat emulsion[tiab]) OR (formulated food\*[tiab]) OR gastrostom\*[tiab] OR hyperalimentation\*[tiab] OR (hypocaloric alimentation\*[tiab]) OR (hypocaloric nutrition[tiab]) OR (intragastric feed\*[tiab]) OR (intragastric nutrition[tiab]) OR nutrition[tiab] OR (nutrition diseases[tiab]) OR (nutrition disorders[tiab]) OR (nutritional intervention\*[tiab]) OR (nutritional requirement\*[tiab]) OR (nutrition supplement\*[tiab]) OR (nutritional support[tiab]) OR (parenteral nutrition[tiab]) OR (percutaneous endoscopic gastrostom\*[tiab]) OR (peripheral parenteral nutrition[tiab]) OR (permissive underfeeding[tiab]) OR (post-pyloric feeding[tiab]) OR (post-pyloric nutrition[tiab]) OR (protein hydrolysate[tiab]) OR (supplemental feed\*[tiab]) OR (total parenteral nutrition[tiab]) |
| #7 | Search ("Randomized Controlled Trial"[pt] OR "Controlled Clinical Trial"[pt] OR randomized[tiab] OR placebo[tiab] OR "Drug Therapy"[sh] OR randomly[tiab] OR trial[tiab] OR groups[tiab]) NOT ("Animals"[mh] NOT "Humans"[mh]) |
| #8 | Search #4 and #5 and #6 and #7 |
| #9 | Search "Child"[mh] NOT "Adult"[mh] |
| #10 | Search #8 not #9 |

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| CENTRAL |  |
| #1 | (cancer or cancers or oncolog\* or neoplasms):ti,ab,kw |
| #2 | [mh neoplasms] |
| #3 | #1 or #2 |
| #4 | (ambulatory or outpatient\* or home):ti,ab,kw |
| #5 | [mh "Ambulatory Care"] or [mh Outpatients] or [mh "Home Nursing"] |
| #6 | #4 or #5 |
| #7 | (patient or patients):ti,ab,kw |
| #8 | [mh Patients] |
| #9 | #7 or #8 |
| #10 | #3 and #6 and #9 |
| #11 | [mh "Feeding Methods"] or [mh "Nutrition Therapy"] or [mh Enterostomy] or [mh "Fat Emulsions, Intravenous"] or [mh "Food, Formulated"] or [mh Gastrostomy] or [mh "Nutrition Disorders"] or [mh "Protein Hydrolysates"] or [mh "Nutritional Support"] or [mh "Nutritional Requirements"] or [mh "Energy Intake"] or [mh "Dietary Proteins"] or [mh "Dietary Supplements"] |
| #12 | (alimentation or "branched chain amino acids" or BCAA or (dietary NEXT (disorder\* or protein\* or supplement\*)) or "energy intake" or "enteral nutrition" or enterostom\* or "fat emulsion" or (formulated NEXT food\*) or gastrostom\* or hyperalimentation\* or (hypocaloric NEXT (alimentation\* or nutrition)) or (intragastric NEXT (feed\* or nutrition)) or nutrition or (nutrition NEXT (diseases or disorders)) or (nutritional NEXT (intervention\* or requirement\*)) or (nutrition NEXT supplement\*) or "nutritional support" or "parenteral nutrition" or ("percutaneous endoscopic" NEXT gastrostom\*) or "peripheral parenteral nutrition" or "permissive underfeeding" or ("post-pyloric" NEXT (feeding or nutrition)) or "protein hydrolysate" or (supplemental NEXT feed\*) or "total parenteral nutrition"):ti,ab,kw |
| #13 | #11 or #12 |
| #14 | [mh Rehabilitation] or [mh Exercise] or [mh "Physical Therapy Modalities"] or [mh "Early Ambulation"] or [mh Walking] or [mh "Nursing Care"] |
| #15 | (rehabilitation or exercise\* or training or "physical therapy" or kinesiotherapy or mobilization or walking or ambulation or "nursing care"):ti,ab,kw |
| #16 | #14 or #15 |
| #17 | #10 and #13 and #16 |
| #18 | [mh Child] not [mh Adult] |
| #19 | #17 not #18 |
| #20 | #17 not #18 with Publication Year from 2016 to 2020, in Trials |

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| Ichushi-Web |  |
| #1 | (癌患者/TH or 癌患者/AL or がん患者/AL) or ((腫瘍/TH or 癌/AL or がん/AL) and (患者/TH or 患者/AL)) |
| #2 | (在宅/AL or 外来/AL or 通院/AL or (ライフスタイル/TH or ライフスタイル/AL) or 生活/AL) |
| #3 | 栄養投与方法/AL or (栄養管理/TH or 栄養療法/AL) or (静脈栄養/TH or 静脈栄養/AL) or (経腸栄養/TH or 経腸栄養/AL) or (胃造瘻術/TH or 胃瘻造設/AL) or 経皮内視鏡胃瘻造設術/AL or (栄養障害/TH or 栄養障害/AL) or (栄養補助/TH or 栄養サポート/AL) or NST/AL or 必要エネルギー量/AL or (エネルギー摂取量/TH or エネルギー摂取量/AL) or (栄養補助食品/TH or 栄養補助食品/AL) or 補助栄養食品/AL or 補助食品/AL or 食支援/AL or ("Branched-Chain Amino Acids"/TH or 分枝鎖アミノ酸/AL) and BCAA/AL or (タンパク質/TH or タンパク質/AL) or 脂肪乳剤/AL or (過栄養/TH or 過栄養/AL) or (栄養失調/TH or 栄養失調/AL or 低栄養/AL) or (栄養生理学的現象/TH or 栄養/AL) or 栄養介入/AL or 経口栄養/AL or (摂食/TH or 経口摂取/AL) or (体重減少/TH or ダイエット/AL) or (食事療法/TH or 食事療法/AL) or (栄養飲料/TH or 栄養飲料/AL) or (栄養指導/TH or 栄養指導/AL) |
| #4 | (リハビリテーション/TH or リハビリテーション/AL) or (体育とトレーニング/TH or 訓練/AL) or (理学療法/TH or 理学療法/AL) or (作業療法/TH or 作業療法/AL) or (身体運動/TH or エクササイズ/AL or フィットネス/AL or 動作/TH or 運動/AL) or 離床/AL or (歩行/TH or 歩行/AL) or (実技演習/TH or トレーニング/AL) or (運動活性/TH or 身体活動/AL) or (スポーツ/TH or スポーツ/AL) |
| #5 | (臨床試験/TH or 臨床試験/AL) or 比較試験/AL or (ランダム化比較試験/TH or ランダム化比較試験/AL or 無作為化比較試験/AL) or (準ランダム化比較試験/TH or 準ランダム化比較試験/AL) or (第I相試験/TH or 第I相試験/AL) or (第II相試験/TH or 第II相試験/AL) or (第III相試験/TH or 第III相試験/AL) or (第IV相試験/TH or 第IV相試験/AL) or 盲検/AL or ランダム/AL or (プラセボ/TH or プラセボ/AL) or (対照群/TH or 対照群/AL) or コントロール群/AL |
| #6 | #1 and #2 and #3 and #4 and #5 |

* Condition or domain being studied.

Adult patients with cancer receive rehabilitation with nutrition management.

* Participants/population.

Out adult patients with cancer receive rehabilitation with nutrition management without refractory cachexia (ECOG: Performance Status3, Karnofsy Performance Scale40)

Exclusion: Hospitalized patients, Children, Patients with cachexia

* Intervention(s), exposure(s).

Rehabilitation with management of nutrition, counseling, educations

* Comparator(s)/control.

Alternative or sham nutritional supplement or standard meal provision or no intervention or only rehabilitation

* Types of study to be included.

Randomized controlled trials quasi-randomized and cluster randomized trials will also be included whereas crossover trials will be excluded.

* Context.

Rehabilitation therapy refers to comprehensive or individualized intervention program provided by specialist(s) for certain period of time to recover any sort of disabilities, regardless of duration per day and frequency.

* Main outcome(s).

Quality of life: Quality of life should be assessed using validated measurement tools such as SF36, Eurp5D

Measures of effect

Timing may be limited in home or out department of Hospitals

* Additional outcome(s).

Activities of daily living (ADL)

ADL should be assessed using validated scale such as Barthel Index, Functional Independence Measure, Kats Index, and Frenchay Activities Index at end of each intervention period.Activities of daily living (ADL) ADL should be assessed using validated scale such as Barthel Index, Functional Independence Measure, Kats Index, and Frenchay Activities Index at end of each intervention period. Adverse event.

Measures of effect

Timing may be limited in home or out department of Hospitals

* Data extraction (selection and coding).

The procedure for selecting studies for the review are done by three researchers (YT, MS, IT). The procedure for extracting data are done by seven researchers (YT, MS, EK, YS, CS, MN, IT). Any discrepancy in selecting studies and data extraction will be resolved by discussion and decision of third researcher (RM).

* Risk of bias (quality) assessment.

Two authors will independently assess risk of bias using the Cochrane 'Risk of bias' tool. We will use GRADE approach to assess the quality of the body of evidence. Any disagreements over the risk of bias and the quality of the body of evidence of included studies between the two authors will be resolved with discussion.

* Strategy for data synthesis.

We will provide a quantitative synthesis of the findings from the included studies and summaries of intervention effects for each study by calculating risk ratios (for dichotomous outcomes) or standardized mean differences (for continuous outcomes).

We anticipate that there will be limited scope for meta-analysis because of the range of different outcomes measured across the small number of existing trials. However, where studies have used the same type of intervention and comparator, with the same outcome measure, we will pool the results using a randomeffects meta-analysis, with standardised mean differences for continuous outcomes and risk ratios for binary outcomes, and calculate 95% confidence intervals and two sided P values for each outcomes. Heterogeneity between the studies in effect measures will be assessed using both the Chi-squared test and the I-squared statistic. We will consider an I-squared value greater than 60% indicative of substantial heterogeneity.

* Analysis of subgroups or subsets.

If the necessary data are available, subgroup analyses of age (stage of cancer and age) will be done for people with different settings separately.