Supplementary material 2

Preliminary Screening questions and Data Extraction Form for Comparative long-term effectiveness and safety of primary bariatric surgeries in treating type 2 diabetes mellitus in adults: a protocol for systematic review and network meta-analysis of randomized controlled trials

Reference code_____

Basic information			
Code of Original study		Code of Report	
Code of Valuator		Date of Evaluation	
Contact info of Author			
Quotation format(author, study title, journal, Year of publication, volume)			
Inclusion and exclusion criteria			
Inclusion criteria	**Participants** ① Include overweight or obese adults with type 2 diabetes mellitus yes □ no□ **Interventions and control** ② Procedures and/or controls involved *Roux-en-Y gastric bypass* □ *sleeve gastrectomy* □ *adjustable gastric banding* □ b*iliopancreatic diversion with duodenal switch* □ *greater curvature plication* □ *one-anastomosis gastric bypass* □ *single anastomosis duodenal-ileal bypass with sleeve gastrectomy* □ *Other surgical procedure(s)* ***except*** *procedures no longer performed, (including biliopancreatic diversion without duodenal switch, jejunoileal bypass, horizontal or vertical gastroplasty, and banding that is not adjustable)* _____ □ *non-surgical treatments* □ **Comparisons** ③ Includes comparisons of at least two of the items above yes □ no□ **Study designs** ④ Randomized controlled trial yes □ no□ ⑤ Duration of follow-up≧3 years yes □ no□		
Exclusion criteria	**Participants** ① Restrict participatns to specific diseases other than type 2 diabetes mellitus yes □ no□ ② Do not include adults yes □ no□ ③ Do not include participants with type 2 diabetes mellitus **Interventions and comparison**		

	④ Revisional procedures yes □ no□ Comparisons between/among surgical procedure(s) no longer performed (biliopancreatic diversion without duodenal switch, jejunoileal bypass, horizontal or vertical gastroplasty, not adjustable banding, other _____) or between such procedures and non-surgical treatment yes □ no□ Comparisons between different techniques of the same procedure yes □ no□ **Study designs** ⑤ Non-RCT, comparative studies yes □ no□ ⑥ Duration of follow-up < 3 year yes □ no□ ⑦ Animal studies. yes □ no□
Conclusion of inclusion or exclusion	□inclusion □exclusion □undetermined Support for judgement: _____ _____

Characteristics of Methodology	
Study design(multiple choice)	□ RCT □quasi-RCT □non-RCT □ cluster randomized trial □cross-over trial Support for judgement: _____
Duration of study	Study beginning time: _____year_____month Study ending time: _____year_____month Mean(±SD) or median[inter-quartile range] follow-up period: _____
Sequence generation	randomized □ non-randomized□ qusi-randomized□ undetermined □ Support for judgement: _____
allocation concealment	yes □ no□ undetermined □ Support for judgement: _____
Blinding participants*	□patients □intervenor □evaluator of all outcomes □evaluator of some, but not all outcomes □Statistical analyst comments(if blinding differs among outcomes):_____ Support for judgement: _____
Other factors that may introduce bias?	yes □ no□ Support for judgement: _____
Intentional analysis	yes □ no□ Support for judgement: _____
Other information of study	1. study site: single center □ multi-center□ Location of center(s) _____ 2. early conclusion of study: yes □ no□ 3. funding of study: _____ 4. potential conflict of interest: _____
Baseline information	comparable □; non-comparable □; undetermined □ Support for judgement:(Mean±SD for continuous varibles) intervention 1 intervention2 intervention3 intervention4 sex(M/F) ___/___ ___/___ ___/___ ___/___ Age(year) ___±___ ___±___ ___±___ ___±___ Weight(kg) ___±___ ___±___ ___±___ ___±___ BMI(kg/m^2) ___±___ ___±___ ___±___ ___±___
Characteristics of participants	
Total participants	_____
Settings	□hospital □community □nursing home □outpatient □chronic care institution Others: _____
Type of population	Healthy population: yes □ no□ BMI: BMI_____to_____kg/m^2 Or without complication BMI_____to_____kg/m^2 with complication BMI_____to_____kg/m^2 Type 2 diabetes: _____ Duration of type 2 diabetes: □unlimited □more than_____months
Age	_____to_____years old mean _____ SD _____ median_____ interquartile range _____
Sex	□Unlimited □Male only □Female only
Country	_____
Ethnicity	_____

Attrition (year 3)	Lost to follow-up at year 3: Number of participants lost to follow-up: Group 1 _____, reason _____ Group 2 _____, reason _____ Group 3 _____, reason_____ Group 4 _____, reason_____
	Drop-out at year 3: Number of drop-out participants: Group 1 _____, reason _____ Group 2 _____, reason _____ Group 3 _____, reason_____ Group 4 _____, reason_____
Attrition (year 5)	Lost to follow-up at year 5: Number of participants lost to follow-up: Group 1 _____, reason _____ Group 2 _____, reason _____ Group 3 _____, reason_____ Group 4 _____, reason_____
	Drop-out at year 5: Number of drop-out participants: Group 1 _____, reason _____ Group 2 _____, reason _____ Group 3 _____, reason_____ Group 4 _____, reason_____

Intervention

Group	Number of Participants	Intervention	Description of intervention(intensity, frequency and duration etc.)
Group 1			
Group 2			
Group 3			
Group 4			
Integrity of interventions			

Outcome Data

Planned outcomes	Planned: _____ Difference between report and plan: _____
Planned time of Observation	Plan: _____ Difference between report and plan: _____
Outcome data	Definition Diagnosis or evaluation: criteria for diagnosis or evaluation; Laboratory examination; assay method, unit, reference range; Scale: name, score range, state if higher or lower value is favorable If the evaluation time doesn't concord with the follow-up time, the time point of evaluation should be specified If number of missing data doesn't concord with attrition, the reason should be specified
Full diabetes remission	Evaluation criteria: _____ Evaluation time (if not consistent)_____

	Reason for extra missing data _____
Partial diabetes remission	Evaluation criteria: _____ Evaluation time (if not consistent)_____ Reason for extra missing data _____
Major adverse event	Evaluation criteria: _____ Criteria of major adverse effect: _____ Evaluation time (if not consistent) early complication: post-op _____day; late complication: post-op_____day-_____year Reason for extra missing data_____
Diabetes management goal including HbA1c, BP and LDL-C	Evaluation criteria: _____ Evaluation time (if not consistent)_____ Reason for extra missing data _____
Percentage excess weight loss (% EWL)	Definition: _____ Unit: □% □Other_____ Evaluation time (if not consistent)_____ Reason for extra missing data _____
Body mass index (BMI) at follow-up	Definition: _____ Unit: □kg/m^2 □Other_____ Evaluation time (if not consistent)_____ Reason for extra missing data _____
Weight (Wt) at follow-up	Definition: _____ Unit: □kg □Other_____ Evaluation time (if not consistent)_____ Reason for extra missing data _____
Cardiovascular risk score	Scale name: _____ Score range: _____ which value is favorable □high score □low score Evaluation time (if not consistent)_____ Reason for extra missing data _____
Glycated hemoglobin (HbA1C)	Method: _____ Reagent info _____ Unit: _____ Reference range: _____ Evaluation time (if not consistent)_____ Reason for extra missing data _____
Fasting blood glucose (FBG)	Method: _____ Reagent info _____ Unit: _____ Reference range: _____ Evaluation time (if not consistent)_____ Reason for extra missing data _____
total cholesterol (TC)	Method: _____ Reagent info _____ Unit: _____ Reference range: _____ Evaluation time (if not consistent)_____ Reason for extra missing data _____
low-density lipoprotein cholesterol (LDL)	Method: _____ Reagent info _____ Unit: _____ Reference range: _____ Evaluation time (if not consistent)_____ Reason for extra missing data _____
high-density lipoprotein cholesterol (HDL)	Method: _____ Reagent info _____ Unit: _____ Reference range: _____ Evaluation time (if not consistent)_____ Reason for extra missing data _____
triglyceride (TG)	Method: _____ Reagent info _____ Unit: _____ Reference range: _____ Evaluation time (if not consistent)_____ Reason for extra missing data _____

Systolic blood pressure	Method: _____ Model _____ Unit: _____ Reference: _____ Evaluation time (if not consistent)_____ Reason for extra missing data _____
Diastolic blood pressure	Method: _____ Model _____ Unit: _____ Reference: _____ Evaluation time (if not consistent)_____ Reason for extra missing data _____
Requirement of less anti-diabetic drugs at follow-up	Evaluation criteria: _____ Evaluation time (if not consistent)_____ Reason for extra missing data _____
discontinuation of insulin	Evaluation criteria: _____ Evaluation time (if not consistent)_____ Reason for extra missing data _____
Progression of diabetic retinopathy	Evaluation criteria: _____ Evaluation time (if not consistent)_____ Reason for extra missing data _____
Progression of diabetic nephropathy	Evaluation criteria: _____ Evaluation time (if not consistent)_____ Reason for extra missing data _____
Progression of diabetic neuropathy	Evaluation criteria: _____ Evaluation time (if not consistent)_____ Reason for extra missing data _____
Number of pts experiencing myocardial infarction	Evaluation criteria: _____ Evaluation time (if not consistent)_____ Reason for extra missing data _____
Number of pts experiencing stroke	Evaluation criteria: _____ Evaluation time (if not consistent)_____ Reason for extra missing data _____
Number of pts experiencing amputation of at least one digit	Evaluation criteria: _____ Evaluation time (if not consistent)_____ Reason for extra missing data _____
Number of pts experiencing ischemic limb disease	Evaluation criteria: _____ Evaluation time (if not consistent)_____ Reason for extra missing data _____
Number of pts experiencing heart failure	Evaluation criteria: _____ Evaluation time (if not consistent)_____ Reason for extra missing data _____
urine albumin/creatinine ratio (ACR)	Method: _____ Reagent info _____ Unit: _____ Reference range: _____ Evaluation time (if not consistent)_____ Reason for extra missing data _____
All-cause mortality	Evaluation criteria: _____ Evaluation time (if not consistent)_____ Reason for extra missing data _____
Other information	
Key conclusion of authors	
Correspondence required	Study author contacted: yes □ no□ Study author replied: yes □ no□ Information asked: _____ Information provided: _____

Outcome data (year 3)-Continuous data-1													
	Group 1 (Intervention_____)				Group 2 (Intervention_____)								
	Total number of participants	Reported cases for each outcome	mean	SD	Total amount	Case number	mean	SD	p-value	Estimate of effect	95%CI Lower limit	95%CI Upper limit	Comments (e.g., if the results shown in median and quartile range)
percentage excess weight loss													
BMI at follow-up													
Weight at follow-up													
Cardiovascular risk score													
Glycated hemoglobin (HbA1C)													
Fasting blood glucose (FBG)													
total cholesterol (TC)													
low-density lipoprotein													

cholesterol (LDL)													
high-density lipoprotein cholesterol (HDL)													
triglyceride (TG)													
Systolic blood pressure (SBP)													
Diastolic blood pressure (DBP)													
urine albumin/creatinine ratio													
Outcome data-Continuous data (year 3)-2 (when applicable, i.e. more than 2 comparative arms involved)													
	Group 3 (Intervention_____)				Group 4 (Intervention_____)								
	Total number of participants	Reported cases for each outcome	mean	SD	Total amount	Case number	mean	SD	p-value	Estimate of effect	95%CI Lower limit	95%CI Upper limit	Comments (e.g., if the results shown in median and quartile range)
percentage excess weight loss													
BMI at follow-up													
Weight at follow-													

up													
Cardiovascular risk score													
Glycated hemoglobin (HbA1C)													
Fasting blood glucose (FBG)													
total cholesterol (TC)													
low-density lipoprotein cholesterol (LDL)													
high-density lipoprotein cholesterol (HDL)													
triglyceride (TG)													
Systolic blood pressure (SBP)													
Diastolic blood pressure (DBP)													
urine albumin/creatinine ratio													

Outcome data (year 3)-dichotomous data-1											
	Group 1 (Intervention_____)			Group 2 (Intervention_____)							
	Total number of participants	Reported participants for each outcome	Case number	Total number of participants	Reported participants for each outcome	Total number of participants	p-value	Estimate of effect	95%CI Lower limit	95%CI Upper limit	Comments
Full remission of type 2 diabetes mellitsu											
Full or partial remission of type 2 diabetes mellitsu											
Achieve treatment goals with regard to blood glucose, blood pressure and lipids											
Requirement of less anti-diabetic drugs at follow-up											
Discontinuation of insulin											
Progression of diabetic retinopathy											
Progression of diabetic											

nephropathy											
Progression of diabetic neuropathy											
Number of patients experiencing myocardial infarction											
Number of patients experiencing stroke											
Number of patients experiencing amputation of at least one digit											
Number of patients experiencing ischemic limb disease											
Number of patients experiencing heart failure											
All-cause mortality											
Outcome data-dichotomous data (year 3)-2 (when applicable, i.e. more than 2 comparative arms involved)											
	Group 3 (Intervention_____)			Group 4 (Intervention_____)							
	Total number of participants	Reported participants for each	Case number	Total number of participants	Reported participants for each	Total number of participants	p-value	Estimate of effect	95%CI Lower limit	95%CI Upper limit	Comments

		outcome			outcome						
Full remission of type 2 diabetes mellitsu											
Full or partial remission of type 2 diabetes mellitsu											
Achieve treatment goals with regard to blood glucose, blood pressure and lipids											
Requirement of less anti-diabetic drugs at follow-up											
Discontinuation of insulin											
Progression of diabetic retinopathy											
Progression of diabetic nephropathy											
Progression of diabetic neuropathy											
Number of patients experiencing											

myocardial infarction											
Number of patients experiencing stroke											
Number of patients experiencing amputation of at least one digit											
Number of patients experiencing ischemic limb disease											
Number of patients experiencing heart failure											
All-cause mortality											

Outcome data-adverse event (year 3) 1. Coding of Adverse event: ###(study code) – ##(group number) – ###(adverse event number) 2. After sequence randomization, the adverse event will be re-numbered sequentially before sent for score translation)		
Group 1 (Intervention_____) (Lines may be added when necessary)		
Coding of Adverse event	Quotation from report regarding timing, severity, presentation, diagnosis, and management of adverse event	Anologue score of adverse event
Group 2 (Intervention_____) (Lines may be added when necessary)		
Coding of Adverse event	Quotation from report regarding timing, severity, presentation, diagnosis, and management of adverse event	Anologue score of adverse event

Group 3 (if applicable) (Intervention_____) (Lines may be added when necessary)		
Coding of Adverse event	Quotation from report regarding timing, severity, presentation, diagnosis, and management of adverse event	Anologue score of adverse event
Group 4 (if applicable) (Intervention_____) (Lines may be added when necessary)		
Coding of Adverse event	Quotation from report regarding timing, severity, presentation, diagnosis, and management of adverse event	Anologue score of adverse event

Outcome data (year 5, if applicable)-Continuous data-1

	Group 1 (Intervention_____)				Group 2 (Intervention_____)								
	Total number of participants	Reported cases for each outcome	mean	SD	Total amount	Case number	mean	SD	p-value	Estimate of effect	95%CI Lower limit	95%CI Upper limit	Comments (e.g., if the results shown in median and quartile range)
percentage excess weight loss													
BMI at follow-up													
Weight at follow-up													
Cardiovascular risk score													
Glycated hemoglobin (HbA1C)													
Fasting blood glucose (FBG)													
total cholesterol (TC)													
low-density lipoprotein cholesterol (LDL)													

high-density lipoprotein cholesterol (HDL)													
triglyceride (TG)													
Systolic blood pressure (SBP)													
Diastolic blood pressure (DBP)													
urine albumin/creatinine ratio													
Outcome data-Continuous data (year 5, if applicable)-2 (when more than 2 comparative arms involved)													
	Group 3 (Intervention_____)				Group 4 (Intervention_____)								
	Total number of participants	Reported cases for each outcome	mean	SD	Total amount	Case number	mean	SD	p-value	Estimate of effect	95%CI Lower limit	95%CI Upper limit	Comments (e.g., if the results shown in median and quartile range)
percentage excess weight loss													
BMI at follow-up													
Weight at follow-up													

Cardiovascular risk score													
Glycated hemoglobin (HbA1C)													
Fasting blood glucose (FBG)													
total cholesterol (TC)													
low-density lipoprotein cholesterol (LDL)													
high-density lipoprotein cholesterol (HDL)													
triglyceride (TG)													
Systolic blood pressure (SBP)													
Diastolic blood pressure (DBP)													
urine albumin/creatinine ratio													

Outcome data (year 5, if applicable)-dichotomous data-1											
	Group 1 (Intervention_____)			Group 2 (Intervention_____)							
	Total number of participants	Reported participants for each outcome	Case number	Total number of participants	Reported participants for each outcome	Total number of participants	p-value	Estimate of effect	95%CI Lower limit	95%CI Upper limit	Comments
Full remission of type 2 diabetes mellitsu											
Full or partial remission of type 2 diabetes mellitsu											
Achieve treatment goals with regard to blood glucose, blood pressure and lipids											
Requirement of less anti-diabetic drugs at follow-up											
Discontinuation of insulin											
Progression of diabetic retinopathy											
Progression of diabetic											

nephropathy											
Progression of diabetic neuropathy											
Number of patients experiencing myocardial infarction											
Number of patients experiencing stroke											
Number of patients experiencing amputation of at least one digit											
Number of patients experiencing ischemic limb disease											
Number of patients experiencing heart failure											
All-cause mortality											
Outcome data-dichotomous data (year 5, if applicable)-2 (when more than 2 comparative arms involved)											
	Group 3 (Intervention_____)			Group 4 (Intervention_____)							
	Total number of participants	Reported participants for each	Case number	Total number of participants	Reported participants for each	Total number of participants	p-value	Estimate of effect	95%CI Lower limit	95%CI Upper limit	Comments

		outcome			outcome						
Full remission of type 2 diabetes mellitsu											
Full or partial remission of type 2 diabetes mellitsu											
Achieve treatment goals with regard to blood glucose, blood pressure and lipids											
Requirement of less anti-diabetic drugs at follow-up											
Discontinuation of insulin											
Progression of diabetic retinopathy											
Progression of diabetic nephropathy											
Progression of diabetic neuropathy											
Number of patients experiencing											

myocardial infarction											
Number of patients experiencing stroke											
Number of patients experiencing amputation of at least one digit											
Number of patients experiencing ischemic limb disease											
Number of patients experiencing heart failure											
All-cause mortality											

Outcome data-adverse event (year 5, if applicable)

1. Coding of Adverse event: ###(study code) – ##(group number) – ###(adverse event number)
2. After sequence randomization, the adverse event will be re-numbered sequentially before sent for score translation)
3. Only adverse events not included in the "Outcome data-adverse event (year 3)" table will be listed.

Group 1 (Intervention_____) (Lines may be added when necessary)		
Coding of Adverse event	Quotation from report regarding timing, severity, presentation, diagnosis, and management of adverse event	Anologue score of adverse event

Group 2 (Intervention_____) (Lines may be added when necessary)		
Coding of Adverse event	Quotation from report regarding timing, severity, presentation, diagnosis, and management of adverse event	Anologue score of adverse event

Group 3 (if applicable) (Intervention_____) (Lines may be added when necessary)		
Coding of Adverse event	Quotation from report regarding timing, severity, presentation, diagnosis, and management of adverse event	Anologue score of adverse event
Group 4 (if applicable) (Intervention_____) (Lines may be added when necessary)		
Coding of Adverse event	Quotation from report regarding timing, severity, presentation, diagnosis, and management of adverse event	Anologue score of adverse event