

Prognostic models for predicting remission of diabetes following bariatric surgery

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Supplementary Table 1: Search strategy used in Embase

1. exp *Diabetes Mellitus, Type 2/ or exp *DIABETES MELLITUS/ or diabetes.mp.
2. exp *REMISSION, SPONTANEOUS/ or exp *REMISSION INDUCTION/ or remission.mp.
3. reversal.mp.
4. cure*.mp.
5. resolv*.mp.
6. treat*.mp.
7. 2 or 3 or 4 or 5 or 6
8. bariatric.mp. or exp *BARIATRICS/
9. gastric band*.mp.
10. exp *Gastric Bypass/ or roux en y.mp. or exp *Anastomosis, Roux-en-Y/
11. gastrectomy.mp. or exp *GASTRECTOMY/
12. exp *Gastrectomy/ or sleeve gastrectomy.mp. or exp *Gastroplasty/
13. exp *Biliopancreatic Diversion/ or duodenal switch.mp.
14. metabolic surgery.mp. or exp *Bariatric Surgery/
15. 8 or 9 or 10 or 11 or 12 or 13 or 14
16. (Stratification or ROC curve or discrimination or discriminate or c-statistic or c statistic or area or area under the curve or AUC or calibration or indices or algorithm\$.mp. or multivariable.ti,ab. [mp=title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword, floating subheading word, candidate term word]
17. Validat\$.mp. or Predict\$.ti. or Rule\$.mp. or (Predict\$ and (Outcome\$ or Risk\$ or Model\$)).mp. or ((History or Variable\$ or Criteria or Scor\$ or Characteristic\$ or Finding\$ or Factor\$) and (Predict\$ or Model\$ or Decision\$ or Identif\$ or Prognos\$)).mp. or (Decision\$.mp. and ((Model\$ or Clinical\$).mp. or Logistic Models/)) or (Prognostic and (History or Variable\$ or Criteria or Scor\$ or Characteristic\$ or Finding\$ or Factor\$ or Model\$)).mp. [mp=title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword, floating subheading word, candidate term word]
18. predict*.mp.
19. exp *Observer Variation/ or exp *"Reproducibility of Results"/ or observ*.mp.
20. exp *Algorithms/ or validat*.mp. or exp *"Sensitivity and Specificity"/
21. ((prognos* or predict*) adj3 model).mp. [mp=title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword, floating subheading word, candidate term word]
22. scor*.mp.
23. exp *ROC CURVE/ or ROC.mp.
24. AUC.mp. or exp *Area Under Curve/
25. 16 or 17 or 18 or 19 or 20 or 21 or 22 or 23 or 24
26. 1 and 7 and 15 and 25
27. limit 26 to (english language and last 15 years)

Supplementary Table 2: Papers excluded on full-text

Paper ID	Reasons for exclusion
Bhasker (2018) Bhasker AG, Dixon JB, Lakdawala M. Selection of Bypass vs Sleeve for the Management of Type-2 Diabetes in Severely Obese: Could Ethnicity Play a Role? Obesity surgery. 2018;28(10):3073-9	No model development or validation. Used the prediction score as adjusting variable to choose the appropriate type of bariatric surgery
Haruta (2017) Haruta H, Kasama K, Ohta M, Sasaki A, Yamamoto H, Miyazaki Y, et al. Long-Term Outcomes of Bariatric and Metabolic Surgery in Japan: Results of a Multi-Institutional Survey. Obesity surgery. 2017;27(3):754-62	No model development or validation. Remission rate for type 2 diabetes mellitus at 3 years after surgery stratified by prediction model
Wood (2016) G. Craig Wood MTM, PhD2; Christopher D. Still, DO1; et al Annemarie G. Hirsch, PhD, MPH3. Association of DiaRem Score With Cure of Type 2 Diabetes Following Bariatric Surgery Author Affiliations. JAMA Surg. 2016(151(8):779-781. doi:10.1001/jamasurg.2016.0251).	Population (P)-Used the same population as was used to develop the model
Park J Y et al (2015) Park Ji Y, Kim Yong J. Prediction of Diabetes Remission in Morbidly Obese Patients After Roux-en-Y Gastric Bypass. Obesity surgery. 2016;26(4):749-56.	Outcome (O)- Definition of diabetes remission not fulfilled. Mean follow-up was 12.3±8.0 with IQR of 1.0 months to 41.3months
Panunzi Simona (2016) Panunzi S, Carlsson L, De Gaetano A, Peltonen M, Rice T, Sjoström L, et al. Determinants of Diabetes Remission and Glycemic Control After Bariatric Surgery. Diabetes care. 2016;39(1):166-74LID.	Outcome (O)- Definition of diabetes remission not fulfilled. Diabetes remission was defined without mention of HbA1c or follow up duration
Ha Jane et al (2019) Ha J, Kwon Y, Kim Nam H, Park S, Menzo Emanuele L, Rosenthal Raul J. Discordance in prediction for prognosis of type 2 diabetes after metabolic surgery: comparison of the ABCD, DiaRem, and individualized metabolic surgery models. Annals of surgical treatment and research. 2019;97(6):309-18	No model development or validation. Evaluated discordance between prediction models
Sjoholm K et al (2020)	No model development or validation. Evaluated diabetes relapse rate

<p>Sjoholm K, Svensson PA, Taube M, Jacobson P, Andersson-Assarsson JC, Carlsson LMS, et al. Evaluation of Prediction Models for Type 2 Diabetes Relapse After Post-bariatric Surgery Remission: a Post hoc Analysis of 15-Year Follow-up Data from the Swedish Obese Subjects (SOS) Study. Obesity Surgery. 2020</p>	
<p>Sohal D S et al (2020) Sohal DS, Nain PS, Singh P, Ahuja A, Singh A. ABCD score of > 6 predicts diabetes remission following bariatric surgery. International Journal of Diabetes in Developing Countries. 2020</p>	<p>Outcome (O)- Definition of diabetes remission not fulfilled. Follow up of period of 6 month</p>
<p>Ceperuelo-Mallafre Victoria et al (2019) Ceperuelo-Mallafre V, Llaurodo G, Keiran N, Benaiges E, Astiarraga B, Martinez L, et al. Preoperative Circulating Succinate Levels as a Biomarker for Diabetes Remission After Bariatric Surgery. Diabetes care. 2019;42(10):1956-65.</p>	<p>Outcome (O)- Definition of diabetes remission not fulfilled. Focussed on identifying single predictor, small number of outcomes (<30)</p>

Supplementary Table 3: Data collection questionnaire

Characteristic of study	Types of Study
	Ref id
	Publication Reference
	Aim/Objective
	Number of participants?
	Type of study
Source	Source of data?
	Country
	Centres -> Single/ multiple
	Study Date (start)
	Study Date (end)
	Number of outcome/events
	Number of outcomes/events in relation to the number of candidate predictors (Events Per Variable)
	Number of participants with any missing value (include predictors and outcomes) -> Lost to follow up/ died/ no information
	Handling of missing data -> Others
Participants	Age Mean (SD)
	Males
	Females
	Diabete Duration
	Body mass index mean (SD)
	HbA1c Mean (SD)
	Inclusion Criteria
	Exclusion Criteria
	Types of Surgery -> Gastric Band/ Gastric bypass/ Sleeve gastrectomy/ duodenal switch
Outcomes	Definition for measurement of outcome
	Method for measurement of outcome
	Was the same outcome definition (and method for measurement) used in all patients?
	Type of outcome
	Was the outcome assessed without knowledge of the candidate predictors (i.e., blinded)?
	Were candidate predictors part of the outcome (e.g., in panel or consensus diagnosis)?
	Time of outcome occurrence or summary of duration of study - Follow-up
Predictors	Number of variables
	Types of variables (Number and type of predictors (e.g., demographics, patient history, physical examination, additional testing, disease characteristics)
	Definition for measurement of candidate predictors
	Method for measurement of candidate predictors
	Timing of predictor measurement -> Patient Presentation/ at diagnosis/ treatment initiation/ post operatively

	Handling of predictors in the modelling -> Continuous/ linear/ categorised
Analysis	Modelling method -> Logistic regression
	Method for selection of predictors for inclusion in multivariable modelling (e.g., all candidate predictors, pre-selection based on unadjusted association with the outcome)
	Method for selection of predictors during multivariable modelling (e.g., full model approach, backward or forward selection) and criteria used (e.g., p-value, Akaike Information Criterion)
	Shrinkage of predictor weights or regression coefficients (e.g., no shrinkage, uniform shrinkage, penalized estimation)
Performance	Calibration (calibration plot, calibration slope, Hosmer-Lemeshow test) and Discrimination (C-statistic, D-statistic, log-rank) measures with confidence intervals
	Classification measures (e.g., sensitivity, specificity, predictive values, net reclassification improvement) and whether a-priori cut points were used
	Method used for testing model performance: development dataset only (random split of data, resampling methods e.g. bootstrap or cross-validation, none) or separate external validation (e.g. temporal, geographical, different setting, different investigators)
	In case of poor validation, whether model was adjusted or updated (e.g., intercept recalibrated, predictor effects adjusted, or new predictors added)
	Final and other multivariable models (e.g., basic, extended, simplified) presented, including predictor weights or regression coefficients, intercept, baseline survival, model performance measures (with standard errors or confidence intervals)
	Any alternative presentation of the final prediction models, e.g., sum score, nomogram, score chart, predictions for specific risk subgroups with performance
	Comparison of the distribution of predictors (including missing data) for development and validation datasets
	Interpretation of presented models (confirmatory, i.e., model useful for practice versus exploratory, i.e., more research needed)
	Comparison with other studies, discussion of generalizability, strengths and limitations.

Supplementary Table 4: PROBAST data collection questionnaire

Participants	Were appropriate data sources used, e.g. cohort, RCT or nested case-control study data?
	Were all inclusions and exclusions of participants appropriate?
Predictors	Were predictors defined and assessed in a similar way for all participants?
	Were predictor assessments made without knowledge of outcome data?
	Are all predictors available at the time the model is intended to be used?
Outcome	Was the outcome determined appropriately?
	Was a pre-specified or standard outcome definition used?
	Were predictors excluded from the outcome definition?
	Was the outcome defined and determined in a similar way for all participants?
	Was the outcome determined without knowledge of predictor information?
	Was the time interval between predictor assessment and outcome determination appropriate?
Analysis	Were there a reasonable number of participants with the outcome?
	Were continuous and categorical predictors handled appropriately?
	Were all enrolled participants included in the analysis?
	Were participants with missing data handled appropriately?
	Was selection of predictors based on univariable analysis avoided?
	Were complexities in the data (e.g. censoring, competing risks, sampling of controls) accounted for appropriately?
	Were relevant model performance measures evaluated appropriately?
	Were model overfitting and optimism in model performance accounted for?
	Do predictors and their assigned weights in the final model correspond to the results from multivariable analysis?

Supplementary Table 5: Risk of bias assessment and applicability for model development studies

	Risk of Bias					Applicability			
	Participant s	Predictors	Outcome	Analysis	Overall	Participant s	Predictors	Outcome	Overall
ABCD; Lee et al; 2013 (16)	L	L	L	H	H	L	L	L	L
DiaRem ;Still et al; 2014 (17)	L	L	L	L	L	L	L	L	L
Robert et.al; 2013 (31)	L	L	L	H	H	L	L	L	L
DRS; Ugale S; 2014 (33)	L	L	L	H	H	L	L	L	L
ADDiaRem; Aron-Wisnewsky et.al; 2017 (34)	L	L	L	L	L	L	L	L	L
DiaBetter; Pucci et.al; 2017 (35)	UC	L	L	H	H	L	L	L	L
IMS; Aminian et.al; 2017 (18)	L	L	L	H	H	L	L	L	L
DiaRem 2; Still et al; 2018 (36)	UC	UC	L	H	H	L	L	L	L
Hayes et.al; 2011 (40)	UC	L	L	H	H	L	L	L	L
Dixon el.al; 2013 (13)	L	L	L	UC	UC	L	L	L	L
5 models; Ana et al; 2014 (41)	UC	UC	L	H	H	L	L	L	L
Cotillard et al; 2015 (42)	UC	L	L	H	H	L	L	L	L
Stallard et al; 2016 (43)	UC	L	L	H	H	L	L	L	L
5y-DR, 2018 (37)	UC	L	L	H	H	L	L	L	L
MDR, 2020 (38)	L	L	L	H	H	L	L	L	L
Umemura, 2020 (39)	UC	L	L	H	H	L	L	L	L

L= low risk, UC = unclear, H = high risk

Supplementary Table 6: Risk of bias assessment and applicability for external validation studies

	Risk of Bias					Applicability			
	Participants	Predictors	Outcome	Analyses	Overall	Participants	Predictors	Outcome	Overall Applicability
Lee et al 2015 (44)	L	L	L	UC	UC	L	L	L	L
Lee MH et al 2015 (45)	L	L	L	H	H	L	L	L	L
Lee et al 2015 (46)	L	L	L	UC	UC	L	L	L	L
Sampaio-Neto Jose, et al 2015 (47)	UC	L	L	UC	UC	L	L	L	L
Lee et al 2016 (48)	L	L	L	UC	UC	L	L	L	L
Lee et al 2017 (49)	L	L	L	UC	UC	L	L	L	L
Mehaffey et al 2017 (50)	UC	L	L	H	H	L	L	L	L
Honarmand K, et al 2017 (51)	UC	L	L	UC	UC	L	L	L	L
Tharkan, 2017 (52)	UC	L	L	UC	UC	L	L	L	L
Raj et al, 2017 (53)	L	L	L	H	H	L	L	L	L
Seki et al. 2018 (54)	UC	L	L	UC	UC	L	L	L	L
Shen et al 2018 (55)	L	L	L	UC	UC	L	L	L	L
Naitoh et al 2018 (56)	UC	L	L	UC	UC	L	L	L	L
Ahuja et al 2018 (57)	L	L	L	UC	UC	L	L	L	L
Almalki et al 2018 (58)	L	L	L	UC	UC	L	L	L	L
Chen et al 2018 (59)	L	L	L	UC	UC	L	L	L	L
Wood et al 2018 (60)	L	L	L	UC	UC	L	L	L	L
Dicker et al 2019 (61)	L	L	L	UC	UC	L	L	L	L
Kam et al, 2020 (62)	UC	L	L	UC	UC	L	L	L	L
Park et al, 2020 (63)	L	L	L	UC	UC	L	L	L	L
Lee et al, 2020 (64)	L	L	L	UC	UC	L	L	L	L
Guerron et al, 2020 (65)	L	L	L	L	L	L	L	L	L

L= low risk, UC = unclear, H = high risk

Supplementary Material 7: Example of AUC analysis

Model development studies

Predicting success of metabolic surgery: age, body mass index, C-peptide, and duration score.

Lee et al 2013 (16)

From table:

Table: pop = population achieving diabetes remission; disease: 0 = no diabetes remission, 1 = diabetes remission

score	pop	disease
0	2	0
0	1	1
1	6	0
1	3	1
2	17	0
2	13	1
3	13	0
3	11	1
4	10	0
4	7	1
5	6	0
5	8	1
6	4	0
6	20	1
7	3	0
7	20	1
8	0	0
8	15	1
9	0	0
9	13	1
10	0	0
10	4	1

Analysis:

roctab disease score [fweight= pop]

	ROC	-Asymptotic Normal--		
Obs	Area	Std. Err.	[95% Conf. Interval]	
176	0.7909	0.0329	0.72636	0.85539

A probability score for preoperative prediction of type 2 diabetes remission following RYGB surgery. Still CD, Wood GC, Benotti P, Petrick AT, Gabrielsen J, Strodel WE, et al.

Lancet Diabetes Endocrinol. 2014 score (17)

From table S6 DiaRem score:

Table: pop = population achieving diabetes remission; disease: 0 = no diabetes remission, 1 = diabetes remission

scoring	class	pop	disease
0-2	5	3	0
0-2	5	20	1
3- 7	4	27	0
3- 7	4	48	1
8- 12	3	42	0
8- 12	3	12	1
13- 17	2	133	0
13- 17	2	17	1
18- 22	1	52	0
18- 22	1	1	1

roctab disease class [fweight=pop]

	ROC	-Asymptotic Normal--		
Obs	Area	Std. Err.	[95% Conf. Interval]	
355	0.8404	0.0231	0.79522	0.88560

Prognostic factors and a new preliminary scoring system for remission of type 2 diabetes mellitus after laparoscopic sleeve gastrectomy; Akira Umemura (39)

Table: pop = population achieving diabetes remission; disease: 0 = no diabetes remission, 1 = diabetes remission

score range	score	disease	pop
Poor	1	0	8
Poor	1	1	7
Moderate	2	0	3
Moderate	2	1	5
Good	3	0	0
Good	3	1	26

roctab disease score [fweight= pop], graph summary

	ROC	-Asymptotic Normal--		
Obs	Area	Std. Err.	[95% Conf. Interval]	
49	0.8648	0.0456	0.77538	0.95428

Validation studies

Preoperative Prediction of Type 2 Diabetes Remission After Gastric Bypass Surgery: a Comparison of DiaRem Scores and ABCD Scores. Lee et al (48)

Validation of ABCD score

From Table 4:

Table: pop1 = population achieving diabetes remission defined as hba1c of 6.0%, pop2 = population achieving diabetes remission defined as hba1c of 6.5%, disease: 0 = no diabetes remission, 1 = diabetes remission

score	pop1	pop2	disease
0	2	1	0
0	0	1	1
1	13	11	0
1	1	3	1
2	25	20	0
2	3	8	1
3	25	19	0
3	16	22	1
4	25	17	0
4	17	25	1
5	10	4	0
5	19	25	1
6	10	3	0
6	23	30	1
7	4	3	0
7	23	24	1
8	1	0	0
8	16	17	1
9	0	0	0
9	11	11	1
10	0	0	0
10	1	1	1

Complete remission roctab disease score [fweight= pop1]

ROC		-Asymptotic Normal--		
Obs	Area	Std. Err.	[95% Conf. Interval]	
245	0.8198	0.0258	0.76918	0.87048

Partial remission. roctab disease score [fweight= pop2]

ROC		-Asymptotic Normal--		
Obs	Area	Std. Err.	[95% Conf. Interval]	
245	0.8176	0.0274	0.76389	0.87123

Validating DiaRem score

Table: pop = population achieving diabetes remission defined as hbA1c of 6.5%; disease: 0 = no diabetes remission, 1 = diabetes remission

score	score	pop	disease
0-2	5	0	0
0-2	5	5	1
3-7	4	10	0
3-7	4	58	1
8-12	3	61	0
8-12	3	47	1
13-17	2	13	0
13-17	2	8	1
18-22	1	31	0
18-22	1	12	1

Complete and partial remission. roctab disease score [fweight= pop]

Obs	Area	Std. Err.	[95% Conf. Interval]	
245	0.7319	0.0296	0.67393	0.78995

Predictors of long-term diabetes remission after metabolic surgery; Lee MH et al (45)

From Table 6:

Table: pop1 = CR = population achieving diabetes remission defined as hba1c of 6.0%; pop2 = PR = population achieving diabetes remission defined as hba1c of 6.5%; disease: 0 = no diabetes remission, 1 = diabetes remission

	CR	PR	
score	pop1	pop2	disease
1	4	3	0
1	0	1	1
2	1	1	0
2	0	0	1
3	7	5	0
3	1	3	1
4	9	6	0
4	4	7	1
5	10	5	0
5	5	10	1
6	3	2	0
6	11	12	1
7	12	3	0
7	16	25	1
8	6	2	0
8	18	22	1

9	5	3	0
9	25	27	1
10	3	3	0
10	17	17	1

Complete remission. roctab disease score [fweight= pop1]

	ROC		-Asymptotic Normal--	
Obs	Area	Std. Err.	[95% Conf. Interval]	
157	0.7631	0.0398	0.68507	0.84105

Partial remission disease score [fweight= pop2]

	ROC		-Asymptotic Normal--	
Obs	Area	Std. Err.	[95% Conf. Interval]	
157	0.7323	0.0572	0.62012	0.84445

The Effect and Predictive Score of Gastric Bypass and Sleeve Gastrectomy on Type 2 Diabetes Mellitus Patients with BMI <30 kg/m² (46)

From Table 6:

Table: pop1 = CR = population achieving diabetes remission defined as hba1c of 6.0%; pop2 = PR = population achieving diabetes remission defined as hba1c of 6.5%; disease: 0 = no diabetes remission, 1 = diabetes remission

	CR	PR	
Score	pop1	pop2	disease
0	3	2	0
0	0	1	1
1	12	9	0
1	0	3	1
2	19	14	0
2	2	7	1
3	12	8	0
3	5	9	1
4	9	6	0
4	4	7	1
5	3	2	0
5	5	6	1
6	2	0	0
6	3	5	1
7	0	0	0
7	1	1	1

Complete remission roctab disease score [fweight= pop1]

ROC -Asymptotic Normal--
 Obs Area Std. Err. [95% Conf. Interval]
 80 0.8087 0.0509 0.70903 0.90847

Partial remission. roctab disease score [fweight= pop2]

ROC -Asymptotic Normal--
 Obs Area Std. Err. [95% Conf. Interval]
 80 0.7164 0.0564 0.60575 0.82702

Metabolic Surgery for Diabetes Treatment: Sleeve Gastrectomy or Gastric Bypass World journal of surgery. 2017;41(1):216-23. Lee W-J, Chong K, Aung L, Chen S-C, Ser K-H, Lee Y-C (49)

From tables 6 and 7 of Lee et al (49):

Table: pop1 = population achieving diabetes remission in SG at 1 yr; pop2 = population achieving diabetes remission in gastric bypass at 1 year; pop3 = population achieving diabetes remission in SG at 5 years; pop4 = population achieving diabetes remission in gastric bypass at 5 years; disease: 0 = no diabetes remission, 1 = diabetes remission

			SG 1yr	GB 1yr	SG 5 yr	GB 5 yr
score range	score	disease	pop1	pop2	pop3	pop4
2-0	1	0	5	57	3	15
2-0	1	1	0	9	0	3
4-3	2	0	12	70	9	22
4-3	2	1	4	61	0	6
6-5	3	0	16	27	10	5
6-5	3	1	16	84	0	17
8-7	4	0	13	5	0	4
8-7	4	1	26	79	9	22
10-9	5	0	2	1	0	0
10-9	5	1	15	67	3	15
			109	460	34	109

SG at 1 year, roctab disease score [fweight= pop1]

ROC -Asymptotic Normal--
 Obs Area Std. Err. [95% Conf. Interval]
 109 0.7432 0.0450 0.65501 0.83133

RYGB at 1 year, roctab disease score [fweight= pop2]

ROC -Asymptotic Normal--
 Obs Area Std. Err. [95% Conf. Interval]
 460 0.8483 0.0171 0.81484 0.88185

SG at 5 year, roctab disease score [fweight= pop3]

ROC -Asymptotic Normal--
 Obs Area Std. Err. [95% Conf. Interval]
 34 1.0000 0.0000 1.00000 1.00000

RYGB at 5 year roctab disease score [fweight= pop4]

ROC -Asymptotic Normal--
 Obs Area Std. Err. [95% Conf. Interval]
 109 0.8654 0.0344 0.79796 0.93289

Do Bariatric Surgery-Related Type 2 Diabetes Remission Predictors Add Clinical Value? A Study on Asian Indian Obese Diabetics; Raj et al (53)

From table 6:

Table: pop1= total = population achieving diabetes remission irrespective of type of surgery; pop2 = PR = population achieving diabetes remission in SG; pop3 = PR = population achieving diabetes remission in RYGB; disease: 0 = no diabetes remission, 1 = diabetes remission

			total	SG	RYGB
score range	score	disease	pop1	pop2	pop3
1-5	1	0	5	3	2
1-5	1	1	15	6	9
6-7	2	0	5	4	1
6-7	2	1	22	18	4
>7	3	0	0	0	0
>7	3	1	6	4	2
			53	35	18

Total roctab disease score [fweight= pop1]

ROC -Asymptotic Normal--
 Obs Area Std. Err. [95% Conf. Interval]
 53 0.6105 0.0834 0.44693 0.77400

SG roctab disease score [fweight= pop2]

ROC -Asymptotic Normal--
 Obs Area Std. Err. [95% Conf. Interval]
 35 0.6480 0.0987 0.45443 0.84149

RYGB roctab disease score [fweight= pop3]

ROC -Asymptotic Normal--
 Obs Area Std. Err. [95% Conf. Interval]
 18 0.5556 0.1623 0.23751 0.87360

The Effects of Laparoscopic Sleeve Gastrectomy with Duodenojejunal Bypass on Japanese Patients with BMI < 35 kg/m² on Type 2 Diabetes Mellitus and the Prediction of Successful Glycemic Control; Seki et al (54)

From table 6:

Table: pop1 = CR = population achieving diabetes remission defined as hba1c of 6.0%; pop2 = PR = population achieving diabetes remission defined as hba1c of 6.5%; disease: 0 = no diabetes remission, 1 = diabetes remission

	CR	PR	
score	pop1	pop2	disease
1	6	5	0
1	0	1	1
2	16	13	0
2	0	3	1
3	15	9	0
3	6	12	1
4	4	3	0
4	5	6	1
5	3	2	0
5	6	7	1
6	1	1	0
6	1	1	1
7	0	0	0
7	2	2	1
	65	65	

Complete remission, roctab disease score [fweight= pop1]

ROC		-Asymptotic Normal--		
Obs	Area	Std. Err.	[95% Conf. Interval]	
65	0.8461	0.0451	0.75767	0.93455

Partial remission roctab disease score [fweight= pop2]

ROC		-Asymptotic Normal--		
Obs	Area	Std. Err.	[95% Conf. Interval]	
65	0.7514	0.0592	0.63544	0.86740

Predicting remission of diabetes post metabolic surgery: a comparison of ABCD, diarem, and DRS scores; Ahuja et al (57)

From table 3:

Score range 1 = ABCD score, score range 2 = DiaRem score, score range 3 = DRS score

pop1 = CR = population achieving diabetes remission in ABCD scoring; pop2 = PR = population achieving diabetes remission defined as hba1c of 6.5%; disease: 0 = no diabetes remission, 1 = diabetes remission

ABCD				DiaRem			DRS			
score range 1	score 1	pop 1	disease	score range 2	score 2	pop 2	score range 3	score 3	pop3	disease 3
2-0	1	7	0	18-22	1	10	severe	1	0	0
2-0	1	3	1	18-22	1	3	severe	1	0	1
4-3	2	10	0	13-17	2	10	Moderate	2	17	0
4-3	2	4	1	13-17	2	3	Moderate	2	9	1
6-5	3	9	0	8-12	3	3	Mild	3	12	0
6-5	3	29	1	8-12	3	10	Mild	3	64	1
8-7	4	4	0	3-7	4	7				
8-7	4	32	1	3-7	4	40				
10-9	5	0	0	0-2	5	0				
10-9	5	4	1	0-2	5	16				

ABCD roctab disease score1 [fweight= pop1]

ROC -Asymptotic Normal--
 Obs Area Std. Err. [95% Conf. Interval]
 102 0.7861 0.0488 0.69048 0.88174

DiaRem roctab disease score2 [fweight= pop2]

ROC -Asymptotic Normal--
 Obs Area Std. Err. [95% Conf. Interval]
 102 0.8403 0.0415 0.75898 0.92158

DRS roctab disease3 score3 [fweight= pop3]

ROC -Asymptotic Normal--
 Obs Area Std. Err. [95% Conf. Interval]
 102 0.7315 0.0504 0.63266 0.83026

Laparoscopic gastric bypass for the treatment of type 2 diabetes: a comparison of Roux-en-Y versus single anastomosis gastric bypass. 2018;14(4); Almalki et al (58)

From table 7:

In RYGB

Table: pop = population achieving diabetes remission; disease: 0 = no diabetes remission, 1 = diabetes remission

RYGB				In RYGB with single anastomosis		
score range	score	pop	disease	score range	score	pop
2-0	1	28	0	2-0	1	14
2-0	1	3	1	2-0	1	5
4-3	2	28	0	4-3	2	17
4-3	2	18	1	4-3	2	30
6-5	3	10	0	6-5	3	11
6-5	3	28	1	6-5	3	46
8-7	4	4	0	8-7	4	3
8-7	4	26	1	8-7	4	70
10-9	5	0	0	10-9	5	0
10-9	5	12	1	10-9	5	53

roctab disease score [fweight= pop]

	ROC	-Asymptotic Normal--		
Obs	Area	Std. Err.	[95% Conf. Interval]	
157	0.8397	0.0301	0.78084	0.89864

In RYGB with single anastomosis, roctab disease score [fweight= pop]

	ROC	-Asymptotic Normal--		
Obs	Area	Std. Err.	[95% Conf. Interval]	
249	0.8517	0.0269	0.79903	0.90446

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