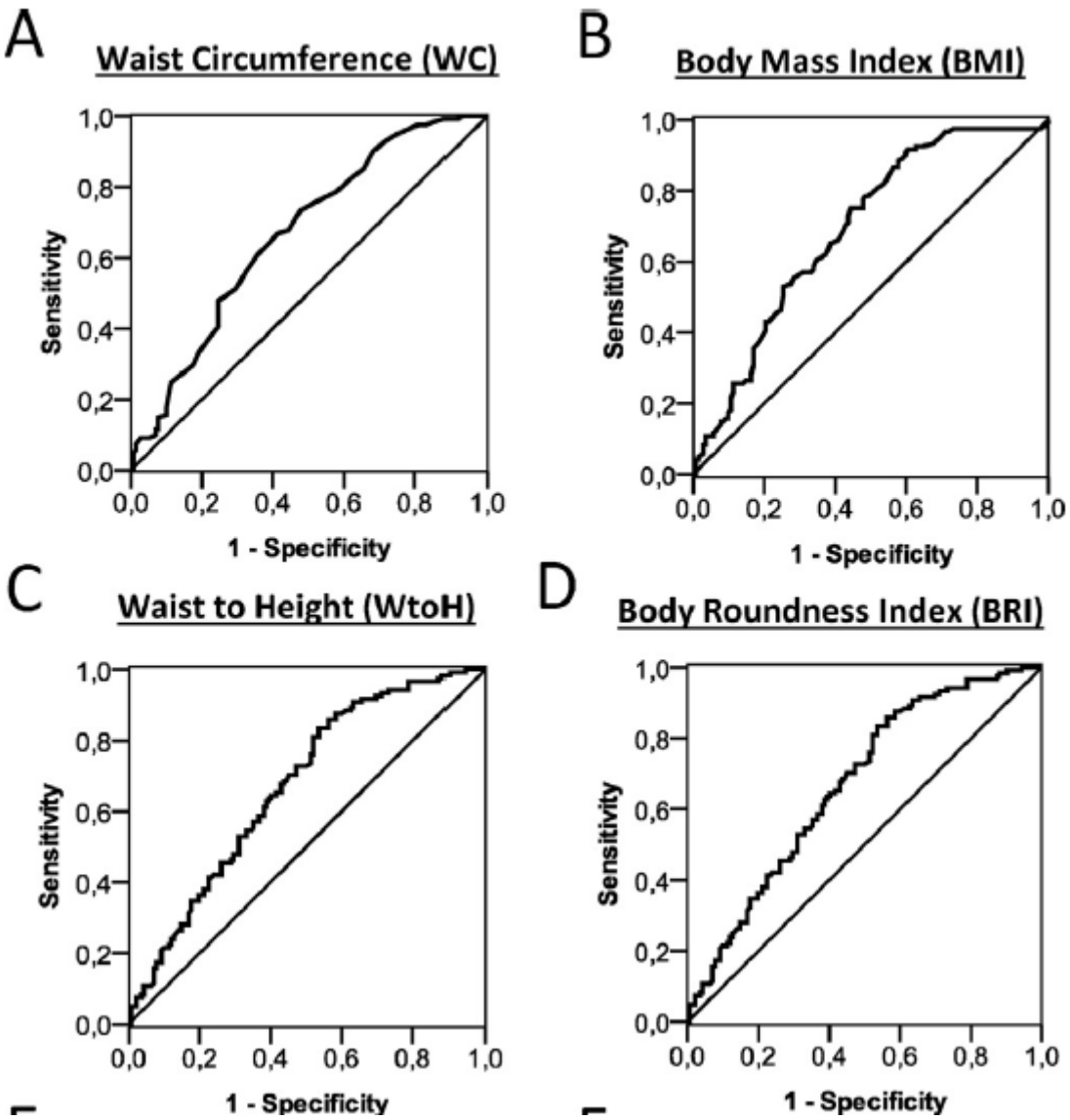
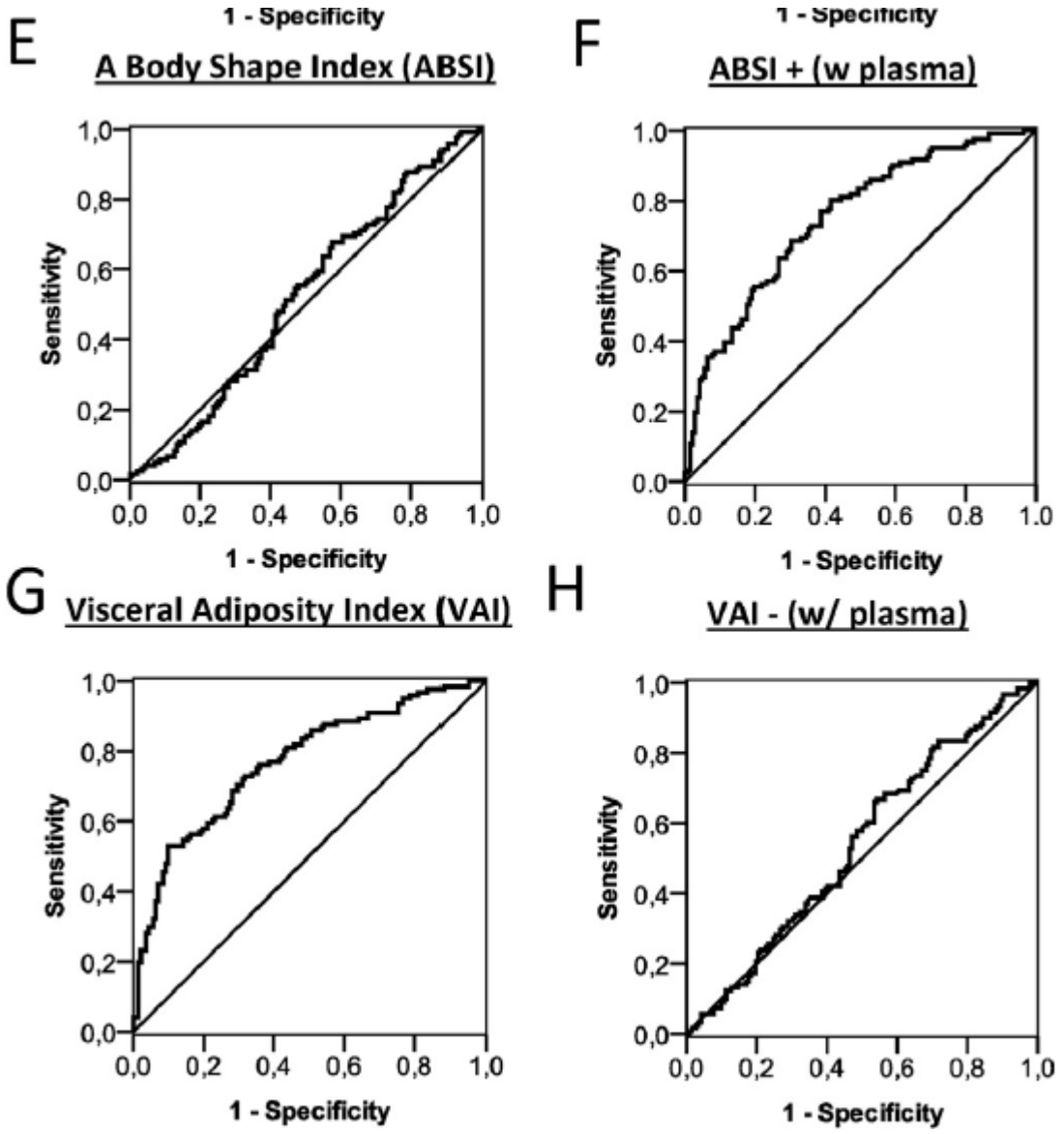
Table 1

Study population. Gender, age, body mass index (BMI), waist circumference (WC), waist to height ratio (WtoH), body roundness index (BRI), a body shape index (ABSI), visceral adiposity index (VAI), plasma triglycerides, total and HDL cholesterol (Chol), glucose and insulin, homeostasis model assessment of insulin resistance (HOMA-IR), systolic (SBP) and diastolic (DBP) blood pressure; prevalence of diabetes mellitus, hypertension, hyperlipidemia at baseline in the whole study cohort and in all and selected overweight – obese (Ow-Ob) individuals that subsequently underwent 5-year Follow-Up (F-Up) evaluation. No statistically significant differences were observed between Ow-Ob subjects in the general population cohort and the Ow-Ob subgroup undergoing follow-up evaluation. Data are presented as mean ± SD.

BASAL	All	Ow-Ob	Ow-Ob F-Up
n	1965	1140	263
Gender (M)	911 (46.4%)	635 (55.7%)	138 (52.5%)
Age (y)	48.5 ± 13.0	51.7 ± 11.7	52.6 ± 8.8
BMI (kg/m^2)	26.71 ± 5.16	29.89 ± 4.36	30.71 ± 4.08
WC (cm)	92.8 ± 13.6	100.5 ± 11.2	102.4 ± 10.0
WtoH	0.557 ± 0.082	0.601 ± 0.72	0.609 ± 0.063
BRI	4.62 ± 1.83	5.55 ± 1.74	5.78 ± 1.52
ABSI	0.808 ± 0.058	0.808 ± 0.050	0.812 ± 0.047
VAI	1.809 ± 1.534	2.260 ± 1.802	2.391 ± 2.185
Triglycerides (mg/dl)	125.0 ± 83.3	147.4 ± 94.0	153.7 ± 112.5
Total-Chol (mg/dl)	208.9 ± 41.7	212.9 ± 41.9	213.7 ± 39.7
HDL-Chol (mg/dl)	55.6 ± 14.6	52.5 ± 13.4	51.0 ± 12.8
Glucose (mg/dl)	95.7 ± 21.6	99.6 ± 24.7	100.2 ± 16.3
Insulin (μU/ml)	10.2 ± 7.5	12.8 ± 8.7	13.2 ± 8.4
HOMA-IR	2.50 ± 2.48	3.28 ± 3.01	3.40 ± 2.73
SBP (mmHg)	134.5 ± 18.5	139.5 ± 18.0	141.5 ± 18.4
DBP (mmHg)	80.7 ± 10.4	83.3 ± 10.0	84.5 ± 9.6
Diabetes (%)	8.4	13.5	14.8
Hypertension (%)	45.7	62.3	64.4
Dyslipidemia (%)	24.1	33.6	37.3
MetS (%)	25.3	39.6	43.0



５年後の予測マーカーとしての価値を表しています
見方は下記の統計のPDFを参照。



＋w plasmaつまり脂質因子を追加すれば診断価値が上がる。－なら価値が下がる。

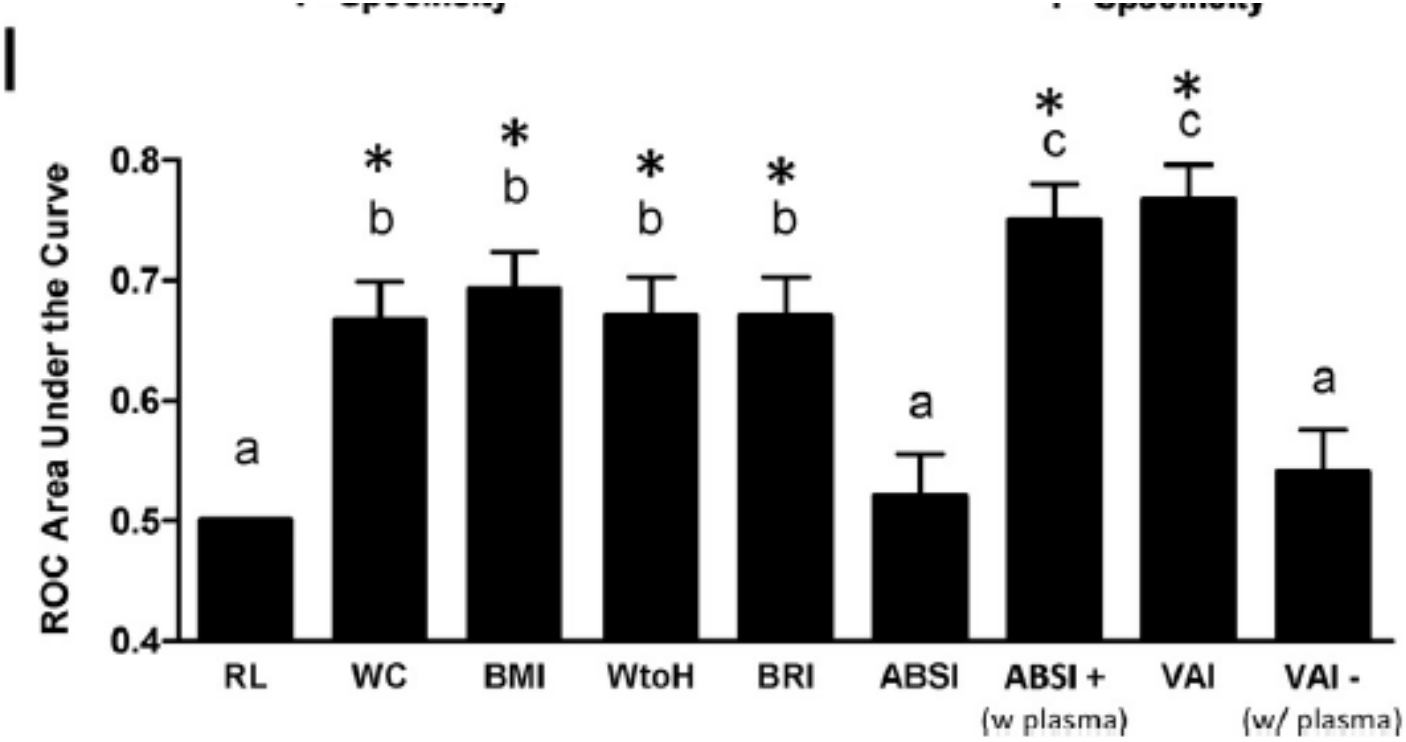


Fig. 3. Prediction for 5-years Metabolic Syndrome diagnosis of Waist Circumference (WC; A), Body Mass Index (BMI; B), Waist to Height Ratio (WtoH; C), Body Roundness Index (BRI; D), A Body Shape Index (ABSI; E), ABSI calculated without plasmatic data (w/plasma; F), Visceral Adiposity Index (VAI; G), VAI calculated without plasmatic data (w/plasma; H) in overweight/obese subjects with follow-up data (n = 263) as assessed by receiver operating characteristic curves (ROC), with Area Under the Curve comparative analysis (I).

診断価値はほぼ同じ。問題は脂質因子があるかないか。

$$\mathrm{BMI} = \mathrm{Weight\ (kg)}/\mathrm{Height}^2\ \mathrm{(m)};$$

$$\mathrm{WHR} = \mathrm{WC\ (cm)}/\mathrm{HC\ (cm)};$$

$$\mathrm{ABSI} = \mathrm{WC\ (m)}/\ [\mathrm{BMI}^{2/3}(\mathrm{kg/m}^2)\mathrm{Height}^{1/2}\ \mathrm{(m)}];$$

$$\mathrm{AVI} = [2\mathrm{WC}^2\ \mathrm{(cm)} + 0.7(\mathrm{WC} - \mathrm{HC})^2\ \mathrm{(cm)}]/1000;$$

$$\mathrm{BAI} = [\mathrm{HC\ (m)}/\mathrm{Height}^{2/3}\ \mathrm{(m)}] - 18;$$

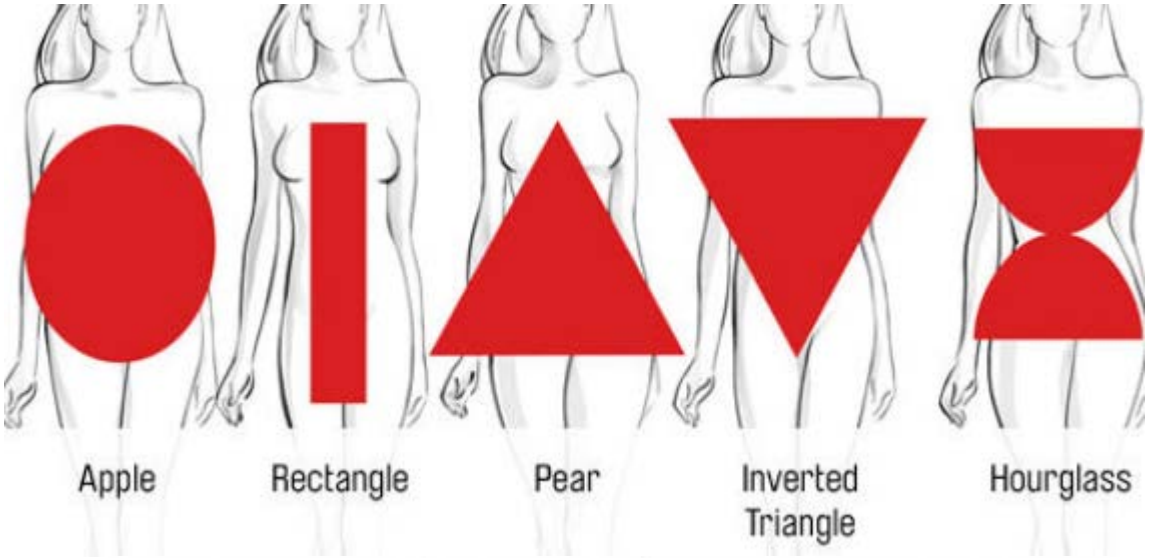
$$\mathrm{BRI} = 364.2 - 365.5[1 - \pi^{-2}\mathrm{WC}^2\ \mathrm{(m)}\mathrm{Height}^{-2}\ \mathrm{(m)}]^{1/2};$$

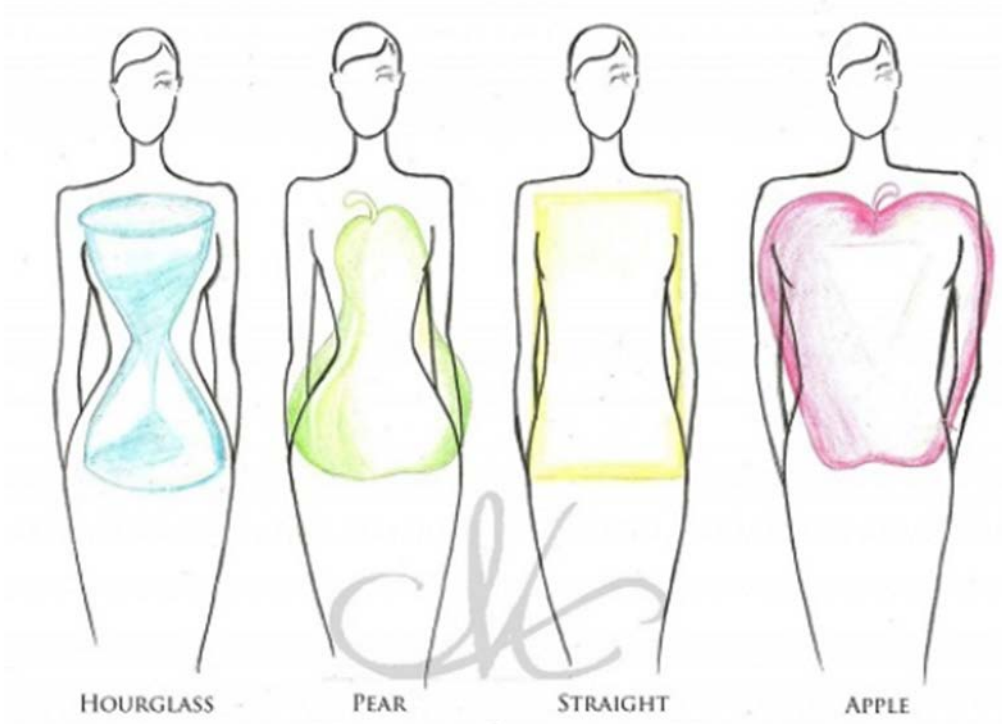
$$\mathrm{CI} = 0.109^{-1}\mathrm{WC\ (m)}[\mathrm{Weight\ (kg)}/\mathrm{Height\ (m)}]^{-1/2};$$

$$\mathrm{VAI_{male}} = [\mathrm{WC\ (cm)}/39.68 - 1.88\mathrm{BMI\ (kg/m2)}]\ [\mathrm{TG\ (mmol/L)}/1.03][1.31/\mathrm{HDL\ (mmol/L)}];$$

$$\mathrm{VAI_{female}} = [\mathrm{WC\ (cm)}/36.58 - 1.89\mathrm{BMI\ (kg/m}^2)]\ [\mathrm{TG\ (mmol/L)}/0.81][1.52/\mathrm{HDL\ (mmol/L)}].$$

以下は本論文とは関係ありませんが参考まで


Apple
Rectangle
Pear
Inverted Triangle
Hourglass


HOURGLASS
PEAR
STRAIGHT
APPLE