評価対象論文リスト(要因:健診受診、アウトカム:循環器病)

評価判定日:2025/5/29

※健診項目を包括的に評価したリスクスコア研究を主に評価

②日本人集団の個別疫学研究

1	Yuanying Li, Hiroshi Yatsuya, Sachiko Tanaka, Hiroyasu Iso, Akira Okayama, Ichiro Tsuji, Kiyomi Sakata, Yoshihiro Miyamoto, Hirotsugu Ueshima, Katsuyuki Miura, Yoshitaka Murakami, Tomonori Okamura, Estimation of 10-Year Risk of Death from Coronary Heart Disease, Stroke, and Cardiovascular Disease in a Pooled Analysis of Japanese Cohorts: EPOCH-JAPAN, Journal of Atherosclerosis and Thrombosis, 2021, Volume 28, Issue
2	Michikazu Nakai, Makoto Watanabe, Yoshihiro Kokubo, Kunihiro Nishimura, Aya Higashiyama, Misa Takegami, Yoko M Nakao, Tomonori Okamura, Yoshihiro Miyamoto, Development of a Cardiovascular Disease Risk Prediction Model Using the Suita Study, a Population-Based Prospective Cohort Study in Japan, Journal of Atherosclerosis and Thrombosis, 2020, Volume 27, Issue 11, Pages 1160-1175
3	Harada, A., Ueshima, H., Kinoshita, Y. et al. Absolute risk score for stroke, myocardial infarction, and all cardiovascular disease: Japan Arteriosclerosis Longitudinal Study. Hypertens Res 42, 567–579 (2019). https://doi.org/10.1038/s41440-019-0220-z
4	Takanori Honda, Sanmei Chen, Jun Hata, Daigo Yoshida, Yoichiro Hirakawa, Yoshihiko Furuta, Mao Shibata, Satoko Sakata, Takanari Kitazono, Toshiharu Ninomiya, Development and Validation of a Risk Prediction Model for Atherosclerotic Cardiovascular Disease in Japanese Adults: The Hisayama Study, Journal of Atherosclerosis and Thrombosis, 2022, 29 巻, 3 号, p. 345-361
5	Honda T, Yoshida D, Hata J, et al. Development and validation of modified risk prediction models for cardiovascular disease and its subtypes: The Hisayama Study. Atherosclerosis. 2018;279:38-44. doi:10.1016/j.atherosclerosis.2018.10.014
6	Yatsuya H, Iso H, Yamagishi K, et al. Development of a point-based prediction model for the incidence of total stroke: Japan public health center study. Stroke. 2013;44(5):1295-1302. doi:10.1161/STROKEAHA.111.677534
7	野田 博之, 磯 博康, 西連地 利己, 入江 ふじこ, 深澤 伸子, 鳥山 佳則, 大田 仁史, 能勢 忠男, 住民健診（基本健康診査）の結果に基づいた脳卒中・虚血性心疾患・全循環器疾患・がん・総死亡の予測, 日本公衆衛生雑誌, 2006, 53 巻, 4 号, p. 265-276
8	Arima, H., Yonemoto, K., Doi, Y. et al. Development and validation of a cardiovascular risk prediction model for Japanese: the Hisayama study. Hypertens Res 32, 1119–1122 (2009)
9	Shizukiyo Ishikawa, Masatoshi Matsumoto, Kazunori Kayaba, Tadao Gotoh, Naoki Nago, Akizumi Tsutsumi, Eiji Kajii, the Jichi Medical School (JMS) Cohort Study Group , Risk Charts Illustrating the 10-year Risk of Stroke among Residents of Japanese Rural Communities: The JMS Cohort Study, Journal of Epidemiology, 2009, Volume 19, Issue 2, Pages 101-106
10	Hiroshi Yatsuya, Hiroyasu Iso, Yuanying Li, Kazumasa Yamagishi, Yoshihiro Kokubo, Isao Saito, Norie Sawada, Manami Inoue, Shoichiro Tsugane, Development of a Risk Equation for the Incidence of Coronary Artery Disease and Ischemic Stroke for Middle-Aged Japanese – Japan Public Health Center-Based Prospective Study –, Circulation Journal, 2016, 80 巻, 6 号, p. 1386-1395
11	Kunihiro Nishimura, Tomonori Okamura, Makoto Watanabe, Michikazu Nakai, Misa Takegami, Aya Higashiyama, Yoshihiro Kokubo, Akira Okayama, Yoshihiro Miyamoto, Predicting Coronary Heart Disease Using Risk Factor Categories for a Japanese Urban Population, and Comparison with the Framingham Risk Score: The Suita Study, Journal of Atherosclerosis and Thrombosis, 2014, Volume 21, Issue 8, Pages 784-798

12	Arafa A, Kokubo Y, Sheerah HA, et al. Developing a Stroke Risk Prediction Model Using Cardiovascular Risk Factors: The Suita Study. Cerebrovasc Dis. 2022;51(3):323-330. doi:10.1159/000520100
13	Kokubo Y, Watanabe M, Higashiyama A, Nakao YM, Kusano K, Miyamoto Y. Development of a Basic Risk Score for Incident Atrial Fibrillation in a Japanese General Population - The Suita Study. Circ J. 2017;81(11):1580-1588. doi:10.1253/circj.CJ-17-0277
14	Ahmed Arafa, Rena Kashima, Yuka Yasui, Haruna Kawachi, Chisa Matsumoto, Saya Nosaka, Masayuki Teramoto, Miki Matsuo, Yoshihiro Kokubo, Development of new scores for atherosclerotic cardiovascular disease using specific medical examination items: the Suita Study, Environmental Health and Preventive Medicine, 2023, 28 巻, p. 61

■コホート研究

Reference			Cohort name	Risk assesment period	Number of subjects	Variables included in the model	Outcome	Comments
Author	Title	Year						
Yuanying Li et al.,	Estimation of 10-Year Risk of Death from Coronary Heart Disease, Stroke, and Cardiovascular Disease in a Pooled Analysis of Japanese Cohorts: EPOCH-JAPAN	2021	EPOCH-Japan	10 years	44,869 individuals aged 40–79 years from eight Japanese prospective cohorts	Gender, log-age, smoking, diabetes, urine protein, log-systolic blood pressure P, Log-TC/HDLC, Log-age × log-systolic blood pressure, log-age × smoking	Ischemic heart disease, stroke/cerebral hemorrhage, cardiovascular disease mortality	[C-indices (P-value)] CHD: 0.83 (0.18) Stroke: 0.80 (0.00) CVD: 0.81 (0.25)
Michikazu Nakai et al.,	Development of a Cardiovascular Disease Risk Prediction Model Using the Suita Study, a Population-Based Prospective Cohort Study in Japan	2020	Suita study	10 years	male: 3080 female: 3470	Age, gender, systolic blood pressure, diastolic blood pressure, HDL-C, non-HDL-C, LDL-C, diabetes, smoking, proteinuria, electrocardiogram findings (atrial fibrillation, left ventricular	Cardiovascular disease incidence and mortality	[C-indices] 0.78
Harada, A. et al.,	Absolute risk score for stroke, myocardial infarction, and all cardiovascular disease: Japan Arteriosclerosis Longitudinal Study	2019	JALS study	5, 10 years	67,969	Gender, age, BMI, HDL-C, blood pressure stage (with or without antihypertensive medication), eGFR, non-HDL-C (only for myocardial infarction model), diabetes, smoking, presence of atrial fibrillation (also created without atrial fibrillation)	Myocardial infarction, myocardial infarction + stroke (including hemorrhagic stroke),	
Takanori Honda et al.,	Development and Validation of a Risk Prediction Model for Atherosclerotic Cardiovascular Disease in Japanese Adults: The Hisayama Study	2022	Hisayama study	10 years	2,454 participants aged 40–84 years	Gender, age, systolic blood pressure, diabetes, HDL-C, LDL-C, urine protein, smoking, exercise	Onset of arteriosclerotic diseases (ischemic heart disease, atherothrombotic cerebral infarction)	[Harrell's C statistics] 0.786 [P value] 0.29
Honda T, Yoshida D, Hata J, et al.	Development and validation of modified risk prediction models for cardiovascular disease and its subtypes: The Hisayama Study	2018	Hisayama study	10 years		Gender, age, systolic blood pressure, diabetes, HDL-C, LDL-C, smoking, exercise	Stroke (including hemorrhagic stroke), ischemic heart disease, cardiovascular disease	[Harrell's C statistics] 0.726-0.777 [P value (Hosmer-Lemeshow test] 0.44-0.90
Yatsuya H, et al.	Development of a point-based prediction model for the incidence of total stroke: Japan public health center study	2013	JPHC study (cohort 2)	10 years	201,971 participants aged 40-69 years	Age, sex, current smoking, body mass index, blood pressure, antihypertensive medication use, and diabetes mellitus	Total stroke	[AUC] 0.73

野田 博之ら	住民健診（基本健康診査）の結果に基づいた脳卒中・虚血性心疾患・全循環器疾患・がん・総死亡の予測	2006	Ibaraki prefecture cohort	5 years	92,277	Age, Sex, systolic blood pressure, antihypertensive medication, HDL cholesterol, creatinine, AST, ALT, Smoking	Stroke death	Cox比例ハザードモデルにより計算した偏回帰係数、相対危険度、5年次生存関数を情報源に予測ツールを
Arima, H. et al.	Development and validation of a cardiovascular risk prediction model for Japanese: the Hisayama study	2009	Hisayama study	10 years	2,454 participants aged 40–84 years	age, sex, systolic blood pressure, diabetes, serum high-density lipoprotein cholesterol, serum low-density lipoprotein cholesterol, proteinuria, smoking habits, and regular exercise	Atherosclerotic cardiovascular disease (ASCVD) event	Coxモデルにより予測モデルを構築 [Harrell's C statistics] 0.786 [the Greenwood-Nam-D'Agostino test] P=0.29
Shizukiyo Ishikawa et al.,	Risk Charts Illustrating the 10-year Risk of Stroke among Residents of Japanese Rural Communities: The JMS Cohort Study	2009	JMS Cohort study	10 years	12,276	Sex, age, smoking status, diabetes status, and systolic blood pressure	Stroke incidence, Cerebral hemorrhage incidence, Cerebral	Cox回帰により絶対リスクを推計し、予測モデル構築。Risk chartを描画。
Hiroshi Yatsuya et al.,	Development of a Risk Equation for the Incidence of Coronary Artery Disease and Ischemic Stroke for Middle-Aged Japanese – Japan Public Health Center-Based Prospective Study –,	2016	JPHC study (cohort 2)	10 years	15,672	CAD: age, sex, current smoking, systolic blood pressure, antihypertensive medication use, diabetes, and high-density lipoprotein cholesterol (HDLC) and non-HDLC. Ischemic stroke: The same variables, except non-HDLC, were selected for the ischemic stroke equation.	coronary artery disease (CAD), ischemic stroke	[AUC: Cohort 2] 0.81 for CAD 0.78 for ischemic stroke [AUC: externally to Cohort 1] 0.77 for CAD, 0.76 for ischemic stroke
Kunihiro Nishimura et al	Predicting Coronary Heart Disease Using Risk Factor Categories for a Japanese Urban Population, and Comparison with the Framingham Risk Score: The Suita Study	2014	Suita study	10 years	5521	age, female, current smoker, dm, blood pressure, LDL-C, HDL-C, CKD	Coronary heart disease (CHD)	[C-statistics] 0.831
Arafa A et al.	Developing a Stroke Risk Prediction Model Using Cardiovascular Risk Factors: The Suita Study	2022	Suita study		6641	age, current smoking, increased blood pressure, impaired fasting blood glucose and diabetes, chronic kidney disease, and atrial fibrillation	Stroke event	[AUC] 0.76 [p value of the goodness of fit]
Kokubo Y et al	Development of a Basic Risk Score for Incident Atrial Fibrillation in a Japanese General Population - The Suita Study	2017	Suita study	10 years	6898	age, systolic hypertension, overweight, excessive drinking, current smoking, Non-HDL-C (130-189 mg/dl), Arrhythmia (other than AF), coronary artery disease, cardiac	Atrial fibrillation (AF)	[C-statistics] 0.749
Ahmed Arafa et al	Development of new scores for atherosclerotic cardiovascular disease using specific medical examination items: the Suita Study	2023	Suita study	10 years	7413	sex, age, current smoking, current alcohol drinking, blood pressure, blood glucose, HDL-c (<40 mg/dl), LDL-c (mg/dL), Urinary proteins≧+!	Stroke	[C-statistics] 0.754
							Coronary heart diseaases	0.782

						Atherosclerotic cardiovascular disease	0.762