

API, AVI原著論文 リスト

資料NO	施設名	題名	誌名	著者	リンク先	有用性
1	埼玉医科大学 代謝内科	2型糖尿病患者のオシロメトリック血圧測定による血管指標とFMD,IMTとの比較	Progress in Medicine 30(2003)-2007, 2010	秋山義博、久野裕輝、早川由雅、重藤誠、掛澤政広、岡部正、松田昌文	http://iglobal.ist.go.jp/public/20090422/201002222520778530	糖尿病患者で心血管イベントリスク指標(UKPADS)と良く相関する
2	Advanced Industrial Science and Technology (AIST) (国)産業技術総合研究所	Non-invasive assessment of arterial stiffness using oscillometric blood pressure measurement (オシロメトリック血圧計を用いた動脈ステイフネス評価方法)	BioMedical Engineering OnLine 2012, 11:8	Hidehiko Komine*, Yoshiyuki Asai, Takashi Yokoi and Mutsuko Yoshizawa	https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3359259/	CV値7~9% cPWVとも相関する
3	(国研)理化学研究所	A computational model of the cardiovascular system coupled with an upper-arm oscillometric cuff and its application to studying the suprasystolic cuff oscillation wave, concerning its value in assessing arterial stiffness (上腕オシロメトリック法に連結された心血管系の計算モデルと、動脈硬さの評価におけるsuprasystolicカフの振動波の研究応用)	Computer Methods in Biomechanics and Biomedical Engineering	Fuyou Liang a, Shu Takagi a b, Ryutarō Himeno c & Hao Liu d	https://www.ncbi.nlm.nih.gov/pubmed/21916678	suprasystolicカフ脈波は全身の血行動態を反映する
4	Kumamoto University 熊本大学循環器内科	Association of estimated central blood pressure measured non-invasively with pulse wave velocity in patients with coronary artery disease (冠動脈疾患患者における非侵襲的に測定された推定中樞血圧と脈波伝播速度との関連)	IJC Heart & Vasculature 8 (2015) 52-54	Daisuke Sueta a, Eichiro Yamamoto a*, Tomoko Tanaka b, Yoshihiro Hirata a, Kenji Sakamoto a, Kenichi Tsugita a, Sumio Koima a, Koichi Nishiyama b, Koichi Kakita a, Seiji Hokimoto a, Hideaki Jinouchi b, Hisao Ogawa a	https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5497261/	
5		The accuracy of central blood pressure waveform by novel mathematical transformation of non-invasive measurement (非侵襲的測定から新しい数学的変換によってえられる中心血圧波形の精度)	International Journal of Cardiology Available online 17 March 2015	Daisuke Suetaa, Eichiro Yamamotoa, , Tomoko Tanakab, Yoshihiro Hirataa, Kenji Sakamotoa, Kenichi Tsugitaa, Sumio Kojima, Koichi Nishiyama, Koichi Kakita, Seiji Hokimotoa, Hideaki Jinouchib, Hisao Ogawa	https://pubmed.ncbi.nlm.nih.gov/25897917/	APLAVI, 上腕血圧から中心動脈圧を精度よく推定できる
6	The University of Tokyo 東京大学公衆衛生学教室	Association between novel arterial stiffness indices and risk factors of cardiovascular disease (新しい動脈硬化指標と心血管疾患の危険因子との関連)	BMC Cardiovascular Disorders (2016) 16:211	Masaki Okamoto1*, Fumiaki Nakamura1, Tetsunaga Mushi2 and Yasuki Kobayashi1	https://www.ncbi.nlm.nih.gov/pubmed/27821070	動脈硬化の指標として有用であり、再現性も良い
7	Tohoku University 北大内脚血管	Arterial Stiffness Measured with the Cuff Oscillometric Method Is Predictive of Exercise Capacity in Patients with Cardiac Diseases (カフオシロメトリック法で測定された動脈の硬さは、心臓病患者の運動耐容能を予測する)	Tohoku J. Exp. Med., 2016, 239, 0 1e27-1e34	Yasuhi Tazawa, Nobuyoshi Mori,1 Yoshiko Ogawa,1 Osamu Ito1 and Masahiro Kohzumi1	https://www.istage.ist.go.jp/article/tjem/239/2/239_127/article	CVD患者でAVIは運動耐容能と関係する
8	Tokyo Medical University 東京医科大学循環器内科	Comparison of the clinical significance of single cuff-based arterial stiffness parameters with that of the commonly used parameters (単一カフに基づく動脈硬化パラメータと一般的に使用されるパラメータとの臨床的意義の比較)	Journal of Cardiology xxx (2016) xxx-xxx	Shunsuke Komatsu (MD), Hirofumi Tomiyama (MD, FJCC) *, Kazutaka Kimura (MD), Chisa Matsumoto (MD), Kazuki Shiina (MD, FJCC), Akira Yamashina (MD, FJCC)	https://www.journal-of-cardiology.com/article/S0914-5087(16)30119-8/pdf	APIはPWVと、AVIはAIと有意な相関があるが強い関係ではないので置換はできない。CAGを実施する患者群でAVIのみが有意の上昇していた。
9		Increase in the Arterial Velocity Pulse Index of Patients with Peripheral Artery Disease 血管障害の評価(CAVI)を使用する際は、末梢動脈疾患 (PAD=peripheral arterial disease)が存在する可能性を考慮しなければならぬ。	Pulse 2017;5:154-160	Naotaka Murata Kazuki Shiina Jun Yamashita Nobuhiro Tanaka Tashiro Chikamori Akira Yamashina Hirofumi Tomiyama	https://www.ncbi.nlm.nih.gov/pubmed/29761091	AVIはPAD患者で有意に高く、別集団では血行再建術によりAPLAVIとも有意に改善した
10	Shanghai Ninth People's Hospital, Shanghai Jiao Tong University 上海交通大学第九病院	Non-Invasive Assessment of Early Atherosclerosis Based on New Arterial Stiffness Indices Measured with an Upper-Arm Oscillometric Device (上腕オシロメトリック装置を用いて測定した新しい動脈硬化指数に基づく早期アテローム性動脈硬化症の非侵襲的評価)	Tohoku J. Exp. Med., 2017, 241, 263-270a	Yaping Zhang,1* Ping Yin,1* Zunjun Xu,1 Yushu Xie,1 Changqian Wang,1 Yuqi Fan,1 Fuyou Liang2 and Zhaofang Yin1	https://www.istage.ist.go.jp/article/tjem/241/4/241_263/article	ハイリスクの患者群でAVIは有意に高く、早期の動脈硬化ではPWVでは有意差がなく、AVIのみが高値であった。AVIは早期の動脈硬化を捉える。
11	Yokohama City University 横浜市立大学循環器内科	Successful prediction of cardiovascular risk by non-invasive vascular indexes using suprasystolic cuff oscillometric waveform analysis (収縮期以上のカフシロメトリック波形解析を用いた新しい非侵襲的血管指標による心血管リスクの予測)	Journal of Cardiology 69 (2017) 30-37	Rei Sasaki-Nakashima (MD)ab, Tabito Kino (MD)ab, Lin Chen (MD)ab, Hiroshi Doi (MD)ab, Shintaro Minegishi (MD, PhD)ab, Kaito Abe (MD, PhD)ab, Teruyasu Sugano (MD, PhD)ab, Masataka Tsuguri (PhD)c, Tomoaki Ishigami (MD, PhD)ab,*	https://www.journal-of-cardiology.com/article/S0914-5087(16)30121-6/fulltext	APIとAVIは異なる臨床有用性を示し、APIはフランクムスコアや牧田スコアと関連し、AVIは心臓病と関連している。
12		New non-invasive indexes of arterial stiffness are significantly correlated with severity and complexity of coronary atherosclerosis. 動脈硬化の新しい非侵襲的指標は、冠動脈アテローム性動脈硬化症の重症度および複雑さと有意に相関する。	Clinical and Experimental Hypertension 2018 May 8;1-7.	Doi H1,2, Ishigami T1,2, Nakashima-Sasaki R1,2, Kino T1,2, Chen L1,2, Arakawa K1,2, Teranaka S1,2, Minegishi S1,2, Abe K1,2, Ishikawa T1,2, Sugano T1,2, Tamura K1	https://pubmed.ncbi.nlm.nih.gov/29737880/	
13		Arterial Velocity Pulse Index as a Novel Marker of Atherosclerosis Using Pulse Wave Analysis on High Sensitivity Troponin T in Hypertensive Patients (高血圧患者の高感度トロポニンTと脈波解析を応用したアテローム性動脈硬化症のマーカーとしての速度脈波指標AVI)	Cardiol Res. 2017;8(2):36-43	Takashi Hitsumoto	https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5421484/	AVIは心筋マーカーであるトロポニンTと関係し、全身的な動脈硬化を反映している可能性がある
14	Hitsumoto Medical Clinic ひつもと循環器内科CL	Relationships between the arterial velocity pulse index as a novel marker of atherosclerosis and biomarkers of cardiac or renal condition in patients with type 2 diabetes mellitus 2型糖尿病患者におけるアテローム性動脈硬化症の新規マーカーである動脈速度パルス指数と心臓または腎臓のバイオマーカーの関係	Diabetology International pp 1-8 2017	Takashi Hitsumoto	https://link.springer.com/article/10.1007/s13340-017-0329-8	2型糖尿病患者においてAVIはトロポニンTおよび尿中アルブミンと関連した
15		Clinical Significance of Arterial Velocity Pulse Index in Patients With Stage B Heart Failure With Preserved Ejection Fraction 駆出率が維持されたB期心不全患者における動脈速度パルス指数の臨床的意義	Cardiol Res. 2018;10(3):142-149	Takashi Hitsumoto	https://pubmed.ncbi.nlm.nih.gov/31236176/	
16	Harumidai Clinic 晴海台CL 内科	Effects of Long-term Physical Training on the Bearers of a Float during the Nagasaki Kunchi Festival (長崎くんち祭りに関する山車の担手に対する長期練習の効果)	Intern Med 56: 11-16, 2017	Shigeromi Shibata 1, Hiroaki Kawano 2 and Koji Maemura2	https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5313419/	
17	Teikyo University of Science 帝京科学大学運動科学	New indices of arterial stiffness measured with an upper-arm oscillometric device in active versus inactive women (若い女性における運動習慣の有無と上腕オシロメトリック装置で測定された新しい動脈硬化の指標)	Physiol Rep. 6 (5), 2018, e13574. https://doi.org/10.14814/phy2.13574	Ryota Kobayashi 1, Soichiro Iwanuma2, Nobuyuki Ohashi2 & Takeo Haseguchi2	https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6827568/	若年者で運動習慣の有無でAPLAVIに有意な差を生じる
18	Nagasaki University 長崎大学先端予防医学	Screening Validity of Arterial Pressure-Volume Index and Arterial Velocity-Pulse Index for Preclinical Atherosclerosis in Japanese Community-Dwelling Adults: the Nagasaki Islands Study (日本の地域社会に暮らす成人における症状発現前のアテローム性動脈硬化症のスクリーニングに対する動脈圧容積指標と動脈速度脈波指標の有効性)	J Atheroscler Thromb. 2018 Feb 3; doi: 10.5551/jat.43125. [Epub ahead of print]	Hirotono Ymanashi	https://www.ncbi.nlm.nih.gov/pubmed/29398680	新指標はIMTとも関連し動脈硬化のスクリーニングに有用である
19		Association of Arterial Pressure-Volume Index With the Presence of Significantly Stenosed Coronary Vessels (有意に狭窄した冠動脈の存在と動脈圧容積指標との関連)	J Clin Med Res. 2018;8(8):598-604	Takashi Ueda, Shin-ichiro Mura, b, d, Yasunori Suematsu, Yuhei Shiga, Takashi Kuwano, Makoto Sugihara, Amene Ike, Atsushi Iwata, Hiroaki Nishikawa, Kanta Fujima, c.	https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4931800/	
20	Fukuoka University 福岡大学循環器内科	Cardiac rehabilitation in patients with cardiovascular disease leads various hemodynamic parameters obtained using simple non-invasive tests to their appropriate levels (心臓血管疾患の患者の心臓リハビリテーションは、簡便な非侵襲的試験器を用いて得られた様々な血行動態パラメータを適切なレベルに導く)	IJC Heart & Vasculature 17 (2017) 23-29	Makito Futami a,1, Kanta Fujimi ab,1, Takashi Ueda a, Takuro Matsuda b, Masao Fujita b, Kouji Kainob, Maaya Sakamoto a, Tomoe Horita c, Rie Koyoshi a, Tadaaki Arima a, Yuki Shiga a, Takashi Kuwano a, Ken Kitajima a, Keijiro Saku a,d, Shin-ichiro Mura a,d.*	https://www.ncbi.nlm.nih.gov/pubmed/29201997	
21	Nippon Shinyaku Co., Ltd. 日本新薬・東海大学	Effect of mangosteen pericarp extract on skin moisture and arterial stiffness: Placebo-controlled double-blind randomized clinical trial マンゴスチン果皮抽出物が皮膚の水分および動脈硬化に及ぼす影響; プラセボ対照二重盲検ランダム化臨床試験	Glycative Stress Research	Kazuhiro Maejima 1), Rei-ichi Ohno 2), Ryuji Nagai 3, 2), Shuji Nakata 4)	http://www.toukassress.jp/webj/article/2018/GS18-15.pdf	マンゴスチン抽出サプリメントの摂取はAPLAVIを有意に低下させた。
22	University of Miyazaki 宮崎大学循環器内科	Seasonal variation of novel arterial stiffness indexes in Japanese hypertensive patients 日本人高血圧患者における新しい動脈硬化指数の季節変動	Clinical and Experimental Hypertension	Toshihiro Kita & Kazuo Kitamura	https://www.ncbi.nlm.nih.gov/pubmed/30409046/	

23	Niigata University 新潟大学医学総合研究所 先進血管系 基幹治療・予防講座 新潟大学医学総合研究所呼吸器外科	Relationship between high intensity transient signals at common carotid artery by paste type probe and cerebro-cardiovascular disease in the residents in the area of Chuetsu Oki Earthquake新潟県中越沖地震被災地域一般住民における貼り付けプローブを用いた総頸動脈のhigh intensity transient signalsと脳心血管疾患との関連	Article in Neurosonology 32(2):46-52 January 2019	椋沢 和彦, 伊倉 真衣子, 岡本 竹司, 大久保 由華, 土田 正則, 中島 孝, 品田 恭子, 岡村 浩	https://ci.nii.ac.jp/naid/130007709115/
24	Yokohama City University 横浜市立大学看護学内科学	Successful prediction of clinical outcomes using arterial velocity pulse index, a new non-invasive vascular index, in Japan 新しい非侵襲的血管指標である動脈速度脈波指標(AVD)は臨床転帰を良好に予測する	Vascular Failure 2019; 3(2): 43-50	Rie Sasaki-Nakashima1), Tomoaki Ishigami1), Tabito Kno1), Sae Teranaka-Saigo1), Lin Chen1), Hiroshi Doi1), Michiko Sawayama1), Shintaro Murogashi1), Kentaro Arakawa1), Kato Abe1), Hiromichi Wakui1), Kengo Azushima1), Kouichi Tamura1)2) and Kazuo Kimura1)2)	https://www.istage.ist.go.jp/article/vascfail/3/2/3_43_article/-char/en
25	Department of Cardiology, The First Affiliated Hospital, Chengde Medical College 承德医学院	Roles of arterial pressure volume index and arterial velocity pulse index trajectories in risk prediction in hypertensive patients with heart failure with preserved ejection fraction	Journal of Clinical and Experimental Hypertension Volume 42, 2020 - Issue 5	Jindong Wan 1 2, Sen Liu 1 2, Yi Yang 1 2, Dan Wang 1 2, Fei Ran 1 2, Swei Xia 1 2, Shuangtao Ma 3, Jixin Hou 1 2, Peng Zhou 1 2, Yun Sun 4, Peijian Wang 1 2	https://www.tandfonline.com/doi/full/10.1080/10641963.2019.1705319
26	School of Naval Architecture, Ocean & Civil Engineering, Shanghai Jiao Tong University 上海交通大学	Theoretical Method and Clinical Experiments for Estimating Arterial Stiffness Based on Upper-Arm Cuff Oscillometric Wave	中国医疗设备 2018, Vol. 33 Issue (4): 22-28 DOI: 10.3969/j.issn.1674-1633.2018.04.006	ZHANG Xuji1, ZHANG Yaping2, YIN Zhaofang3, QIN Kairong4, LIANG Fuyou1	http://cs.china-cmd.org/zvslb/CN/abstract/abstract3246.shtml
27	Department of Cardiology, Kurume University Medical Center 久留米大学	Increased arterial velocity pulse index is an independent factor related to skeletal muscle mass reduction and tissue damage in patients with cardiovascular disease	Hypertension Research (2020) 43:534-542	Haruhito Harada1, Hisao Ikeda2, Yasuhiro Nishiyama1, Hiroshi Niyama1, Atsushi Kato1, Hisashi Kail	https://www.nature.com/articles/s41440-020-0404-6
28	West China Hospital, Sichuan University 四川大学华西医院	New indices of arterial stiffness correlate with disease severity and mid-term prognosis in acute decompensated heart failure	Internal and Emergency Medicine Official Journal of the Italian Society of Internal Medicine	Junteng Zhou, Yuhou Weng, Yizhou Feng, Xiaojing Chen & Qing Zhang	https://link.springer.com/article/10.1007/s11799-020-02486-y
29	長崎県農林技術開発センター 食品加工研究室	糖菓ミカンと緑茶三番茶葉を混合抽出して製造した発酵茶摂取が動脈血管の柔軟性に及ぼす影響 —ランタム化二重盲検プラセボ対照並行群比較試験—	Jpn Pharmacol Ther (薬理と治療) vol. 49 no. 1 2021	宮田 裕次1), 田中 麗2), 松井 利雄3), 大曲 勝久4), 潘 殊 正洋4), 山本咲咲子4), 田中 一成4)	http://www.pionline.jp/content/article/0386-3603/49010/63
30	Juntendo University 順天堂大学	Arterial Stiffness Index and Exercise Tolerance in Patients Undergoing Cardiac Rehabilitation	Int Heart J Advance Publication	Kei Fujiwara 1, Kazunori Shimada 1 2 3, Miho Nishitani-Yokoyama 1 2, Mitsuhiro Kunimoto 1, Tomomi Matsubara 1, Rie Matsumori 1, Akiden Abulmiti 1 3, Tatsuro Akawa 1, Shohei Ouchi 1, Megumi Shimizu 1, Kosuke Fukao 1, Tetsuro Miyazaki 1, Akio Honzawa 2, Miki Yamada 2, Masakazu Satoh 4, Tomoyuki Morisawa 4, Tetsuya Takahashi 4, Hiroyuki Daids 1 3 4, Tohru Minamino 1 5	https://pubmed.ncbi.nlm.nih.gov/33731517/
31	Teikyo University of Science 帝京科学大学	Effect of aerobic exercise training frequency on arterial stiffness in middle-aged and elderly females	The Journal of Physical Therapy Science	Ryota Kobayashi, PhD1)*, Kenji Asaki2), Takeo Hashiguchi, PhD3), Hideyuki Negoro, MD, PhD4, 5)	https://pubmed.ncbi.nlm.nih.gov/35527837/
32	Kanazawa University 金沢大学	Relationships between muscle sympathetic nerve activity and novel indices of arterial stiffness using single oscillometric cuff in patients with hypertension	Physiological Reports. 2022;10:e15270.	Hiroyuki Sugimoto1 Takuto Hamaoka1,2 Hisayoshi Mura1,3 Tadayuki Hirai1 Yusuke Mikai1 Takashi Kusayama1 Shinichiro Takashima1 Takeshi Kato1 Shigeo Takata3 Soichiro Usui1 Kenji Sakata1 Masa-Aki Kawasaki1 Masayuki Takamura1	https://pubmed.ncbi.nlm.nih.gov/35587702/
33	Shanghai University of Medicine & Health Sciences Affiliated Zhoupu Hospital 上海大学	Effects of high-intensity interval training on improving arterial stiffness in Chinese female university students with normal weight obese a pilot randomized controlled trial	J Transl Med 2022 Feb; 2:20(1):60.	Jingyun Hu1†, Min Liu2†, Ruoyu Yang3†, Lijun Wang3, Leichao Liang3, Yaanyuan Yang3, Shihao Jia3, Ruyi Chen3, Qianle Liu3, Yu Ren3, Lei Zhu2 and Ming Cai4*	https://pubmed.ncbi.nlm.nih.gov/35109880/
34	Department of Cardiovascular Medicine, Kagoshima City Hospital, Kagoshima, Japan 鹿児島市民病院	Noninvasive Assessment of Arterial Stiffness Using Oscillometric Methods: baPWV, CAVI, APL and AVI	The official Journal of the Japan Atherosclerosis Society and the Asian Pacific Society of Atherosclerosis and Vascular Diseases	Masaaki Miyata	https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6143778/
35	Department of Ultrasound, First Hospital of Shanxi Medical University 山西医科大学第一医院	Relationship of arterial stiffness and central hemodynamics with cardiovascular risk in hypertension	American Journal of Hypertension	Lin Jih, Jianxiong Chen, Mengjiao Zhang, Lei Sha, Mengmeng Gao, Lanyue Tong, Qingqing Chen, Guiqin Shen, Lianfang Du, Zhaqun Li, Liping Liu	https://pubmed.ncbi.nlm.nih.gov/36645322/
36	Yokohama City University 横浜市立大学看護学内科学	Upper-Arm SBP Decline Associated with Repeated Cuff-Oscillometric Inflation Significantly Correlated with the Arterial Stiffness Index	Journal of Clinical Medicine	Noriyuki Kawaura 1, Rie Nakashima-Sasaki 1, Hiroshi Doi 2, Kotaro Uchida 1, Takuya Sugawara 1, Sae Saigo 3, Kaito Abe 1, Kentaro Arakawa 1, Koichi Tamura 1, Kyoshi Hata 4 and Tomoaki Ishigami 1,*	https://pubmed.ncbi.nlm.nih.gov/36362683/
37	Shanghai General Hospital	Relative contributions of arterial stiffness to cardiovascular disease risk score in Chinese women in Framingham and China-PAR model	Frontiers in Cardiovascular Medicine	Lin Jin1,2, Jianxiong Chen3, Lingheng Wu3, Mengjiao Zhang1, Jiali Sun1, Guiqin Shen1, Lianfang Du4, Dingqian Wang5 and haqun Li1,4*	https://pubmed.ncbi.nlm.nih.gov/37396573/
38	Faculty of Medicine, Nara Medical University	A Workload Improves Cardiac Parasympathetic Function during Sleep to Decrease Arterial Stiffness in Workers	Healthcare 2022, 10, 2037. https://doi.org/10.3390/healthcare10102037	Hideyuki Negoro 1,2,*† and Ryota Kobayashi 3,†	https://pubmed.ncbi.nlm.nih.gov/36292483/
39	Nippon Shinyaku Co., Ltd.	Effects of hot water extract of mangosteen pericarp on vascular function: Re-analysis focusing on factors affecting vascular function.	Glycative Stress Research	Kenjiro Hayashi, Aoi Kiyokawa, Kazuhiro Maejima	https://www.istage.ist.go.jp/article/gsr/9/3/9_1707_article/-char/ja/
40	Hitsumoto Medical Clinic ひつもとクリニック内科学	Relationships Between Arterial Pressure-Volume Index and Cardiovascular Disease Biomarkers in Patients With Hypertension	J Clin Med Res. 2022;14(6):229-236	Takashi Hitsumoto	https://pubmed.ncbi.nlm.nih.gov/35836723/