

Curriculum Vitae

Chi-Jen Chang

Education: Sep 1982 to Jun 1988, Kaohsiung Medical College, Kaohsiung, Taiwan.

Professional Training and Employment

1991 to 1994 Resident, Internal Medicine, Chang Gung Memorial Hospital, Taipei, Taiwan

1994 to 1996 Clinical fellow in Cardiology, Chang Gung Memorial Hospital, Taipei, Taiwan

1996 to present Attending Physician in Cardiovascular Division, Chang Gung Memorial Hospital, Taipei, Taiwan

1998 to 1999, Research fellow, International Society of Thrombosis and Hemostasis. Thrombosis Research Institute, London UK.

2010 to present, Associate professor, Chang Gung University, Taoyuan, Taiwan

2017 to present Director of cardiovascular intervention center, Chang Gung Memorial Hospital, Taipei, Taiwan

Professional Affiliations:

The Society of Internal Medicine of Taiwan

The Republic of China Society of Cardiology

The Society of Ultrasound in Medicine, Republic of China

Taiwan Society of Cardiovascular Intervention

2013-2015 Chairman of educational committee, Taiwan Society of Cardiovascular Intervention

2015 to 2018 Chairman of Scientific committee, Taiwan Society of Cardiovascular Intervention

Research Interest:

Interventional cardiology

Vascular biology

Cardiac remodeling in failing heart

Publication:

1. Ko YL*, Hsu TS, Wu SM, Ko YS, **Chang CJ**, Wang SM, Chen WJ, Cheng NJ, Kuo CT, Chiang CW, Lee YS. The G1691A mutation of the coagulation factor V gene (factor V Leiden) is rare in Chinese: an analysis of 618 individuals. Hum Genet. 1996; 98(2): 176-7.
2. **Chang CJ***, Cheng NJ, Ko YS, Ko YL, Chiang CW. Dual left anterior descending coronary artery and anomalous aortic origin of the left circumflex coronary artery: a rare and complicated anomaly. Am Heart J. 1997; 133(5): 598-601.
3. **Chang CJ***, Chou YY, Lee YS. Electron microscopic studies of microvasculature and sympathetic nerve fibers in dilated cardiomyopathy. Chin Med J (Engl). 1998; 111(10): 929-33.
4. Ko YL*, Ko YS, Wang SM, Hsu LA, **Chang CJ**, Chu PH, Cheng NJ, Chen WJ, Chiang CW, Lee YS. The Gln-Arg 191 polymorphism of the human paraoxonase gene is

- not associated with the risk of coronary artery disease among Chinese in Taiwan. *Atherosclerosis*. 1998; 141(2): 259-64.
5. Chu PH, Chiang CW*, Cheng NJ, Ko YL, **Chang CJ**, Chen WJ, Kuo CT, Hsu TS, Lee YS. Gender differences in baseline variables, therapies and outcomes in Chinese patients with acute myocardial infarction. *Int J Cardiol*. 1998; 65(1): 75-80.
 6. Lin CL, Chiang CW*, Shaw CK, Chu PH, **Chang CJ**, Ko YL. Gender differences in the presentation of adult obstructive hypertrophic cardiomyopathy with resting gradient: a study of 122 patients. *Jpn Circ J*. 1999; 63(11): 859-64.
 7. Lin CL, Chiang CW*, Shaw CK, Chu PH, **Chang CJ**, Ko YL. Obstructive hypertrophic cardiomyopathy in Taiwanese adults. *J Formos Med Assoc* 1999; 98(12): 799-806.
 8. Hsu LA, Ko YL*, Wang SM, **Chang CJ**, Hsu TS, Chiang CW, Lee YS. The C677T mutation of the methylenetetrahydrofolate reductase gene is not associated with the risk of coronary artery disease or venous thrombosis among Chinese in Taiwan. *Hum Hered*. 2001; 51(1-2): 41-5.
 9. Hsu TS*, Hsu LA, **Chang CJ**, Sun CF, Ko YL, Kuo CT, Chiang CW, Lee YS. Importance of hyperhomocysteinemia as a risk factor for venous thromboembolism in a Taiwanese population. A case-control study. *Thromb Res*. 2001; 102(5): 387-95.
 10. Hsu LA*, Chiang CW, **Chang CJ**, Chu PH, Hsu TS, Ko YL, Kuo CT. Clinical significance of positive treadmill exercise test in patients with mitral stenosis. *Acta Cardiol Sin* 2002; 18(4): 160-4.
 11. Cheng NJ*, **Chang CJ**, Ho WJ. Retrograde dilatation of a totally occluded ostial left anterior descending artery from saphenous venous graft in the descending aorta following stenting of the aorto-ostial graft restenosis in a patient with left main coronary artery stenosis. *Catheter Cardiovasc Interv*. 2003; 59(3): 357-60.
 12. Cheng NJ*, Ho WJ, Ko YS, Yang DY, Wang CL, Ko YL, Chen WJ, **Chang CJ**. Percutaneous cardiac catheterization combining direct venipuncture of superficial forearm veins and transradial arterial approach-A Feasible Approach. *Acta Cardiol Sin* 2003; 19(3): 159-64.
 13. Yang TY, Cheng NJ*, **Chang CJ**, Lai MC, Ko YL. Giant coronary artery aneurysm mimicking a paracardiac mass. *Chang Gung Med J*. 2003; 26: 133-7.
 14. **Chang CJ***, Hsu LA, Chiang CW, Ko YS, See LC, Shen YC, Ko YL, Kou CT, Lee YS, Pang JH. Percutaneous transvenous mitral valvulotomy normalizes elevated circulating levels of tumor necrosis factor-alpha and interleukin-6 in mitral stenosis with heart failure. *Am J Cardiol*. 2003; 91(8): 1018-20, A8.
 15. Ho WJ, Tsay PK, Chu PH, **Chang CJ**, Kuo CT, Chen WJ*. Predictors of stable outcome in treating chronic heart failure patients with carvedilol. *Jpn Heart J*. 2004; 45(5): 823-32.
 16. **Chang CJ***, Ko PJ, Hsu LA, Ko YS, Ko YL, Chen CF, Huang CC, Hsu TS, Lee YS, Pang JH. Highly increased cell proliferation activity in the restenotic hemodialysis vas-

- cular access after percutaneous transluminal angioplasty: implication in prevention of restenosis. *Am J Kidney Dis.* 2004; 43(1): 74-84.
17. Lin PC, **Chang CJ**, Wang CL, Kuo CT*. Reversible Left Ventricular Dysfunction with Apical Ballooning — A Case Report of Ampulla Cardiomyopathy. *Acta Cardiol Sin* 2005; 21(4): 239-43.
 18. Yeh YH, **Chang CJ***, Hsu TS, Ko YS, Hsu LA, Kuo CT. Cardiac catheterization complicated by iliacus abscess: a rare complication of transfemoral approach--a case report. *Angiology.* 2005; 56(5): 623-5.
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 20. Hsu LA, Ko YL*, **Chang CJ**, Hu CF, Wu S, Teng MS, Wang CL, Ho WJ, Ko YS, Hsu TS, Lee YS. Genetic variations of apolipoprotein A5 gene is associated with the risk of coronary artery disease among Chinese in Taiwan. *Atherosclerosis.* 2006; 185(1): 143-9.
 21. Ko YL*, Hsu LA, Hsu TS, Tsai CT, Teng MS, Wu S, **Chang CJ**, Lee YS. Functional polymorphisms of FGA, encoding alpha fibrinogen, are associated with susceptibility to venous thromboembolism in a Taiwanese population. *Hum Genet.* 2006; 119(1-2): 84-91.
 22. Hsu LA*, Ko YL, **Chang CJ**, Wang CL, HO WJ, Ko YS. G-50T polymorphism of the cytochrome P450 epoxygenase CYP2J2 gene is not associated with the risk of coronary artery disease among Chinese in Taiwan. *Acta Cardiol Sin* 2006; 22(3): 148-53.
 23. Hsiao JF, Hsu LA*, **Chang CJ**, Wang CL, Ho WJ, Chu PH, Ko YS, Kuo CT. Late migration of a Sideris septal occluder device for closure of atrial septal defect into the left atrium with mitral valve obstruction. *Am J Cardiol.* 2007; 99(10): 1479-80.
 24. Hsu LA*, Ko YL, **Chang CJ**, Teng MS, Wu S, Hu CF. Apolipoprotein A5 gene -1131T/C polymorphism is associated with the risk of metabolic syndrome in ethnic Chinese in Taiwan. *Clin Chem Lab Med.* 2008; 46(12): 1714-9.
 25. Wu CT, Kuo CT, Luqman Nazar, Wang CL*, Ho WJ, Hsu LA, **Chang CJ**. Three-dimensional automated contour detection for global systolic dyssynchrony index measurements. *Acta Cardiol Sin* 2008; 24(3): 136-43.
 26. Hsu LA*, Teng MS, Ko YL, **Chang CJ**, Wu S, Wang CL, Hu CF. The PCSK9 gene E670G polymorphism affects low-density lipoprotein cholesterol levels but is not a risk factor for coronary artery disease in ethnic Chinese in Taiwan. *Clin Chem Lab Med.* 2009; 47(2): 154-8.
 27. Hsu LA, Ko YL*, Wu S, Teng MS, Chou HH, **Chang CJ**, Chang PY. Association of soluble intercellular adhesion molecule-1 with insulin resistance and metabolic syndrome in Taiwanese. *Metabolism.* 2009; 58(7): 983-8.
 28. Ho WJ, Hsu TS*, Tsay PK, Hsu LA, Wang CL, **Chang CJ**, Yu KH, Chen JY, Kuo CT. Se-

- rial plasma brain natriuretic peptide testing in clinical management of pulmonary arterial hypertension. *Acta Cardiol Sin* 2009; 25(3): 147-53.
29. Lin MS, Wu LS, Cheng NJ, Lin PC, **Chang CJ***. Thrombus aspiration complicated by systemic embolization in patients with acute myocardial infarction. *Circ J*. 2009; 73(7): 1356-8.
 30. **Chang CJ**, Chen CC, Hsu LA, Chang GJ, Ko YH, Chen CF, Chen MY, Yang SH, Pang JH*. Degradation of the internal elastic laminae in vein grafts of rats with aorto-caval fistulae: potential impact on graft vasculopathy. *Am J Pathol*. 2009; 174(5): 1837-46.
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 32. **Chang CJ**, Hsu LA, Ko YH, Chen PL, Chuang YT, Lin CY, Liao CH, Pang JH*. Thrombin regulates matrix metalloproteinase-9 expression in human monocytes. *Biochem Biophys Res Commun*. 2009; 385(2): 241-6.
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 36. **Chang CJ**, Wu LS, Hsu LA, Chang GJ, Chen CF, Yeh HI, Ko YS*. Differential endothelial gap junction expression in venous vessels exposed to different hemodynamics. *J Histochem Cytochem*. 2010; 58(12): 1083-92.
 37. Hsiao JF, Chou HH, Hsu LA, Wu LS, Yang CW, Hsu TS, **Chang CJ***. Vascular changes at the puncture segments of arteriovenous fistula for hemodialysis access. *J Vasc Surg*. 2010; 52(3): 669-73.
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 41. Hsieh CA, Ko YL, Hsu TS, **Chang CJ**, Teng MS, Wu Semon, Hsu LA*. Angiotensin-I

- converting enzyme gene polymorphisms and the risk of venous thromboembolism in an ethnically Chinese population living in Taiwan. *Acta Cardiol Sin.* 2011; 27(4): 252-58.
42. Hsiao PG, Hsu LA, Lin CP, Ko YS, Chen WJ, Kuo CT, **Chang CJ***. The clinical outcome in treating real-world patients of multi-vessel coronary artery disease with exclusive usage of drug-eluting stent for complex lesions and liberal usage of drug-eluting or bare metal stent for simple lesions. *J Taiwan Cardiovasc Interv.* 2011; 2: 1-11.
43. Lin YC, Chang YS, Chen MS, Ho WJ, Kuo CT, **Chang CJ***. Effective myocardial salvage with percutaneous coronary intervention in late diagnosed acute post-traumatic ST-elevation myocardial infarction. *J Emerg Med.* 2012; 42(1): 28-35.
44. Wang CC, Hsu LA, Chen WJ, Ko YS, Kuo CT, **Chang CJ***. Global risk classification predicts the clinical outcomes of patients with significant left main coronary artery disease undergoing coronary bypass surgery. *Acta Cardiol Sin.* 2012; 28(2): 118-28.
45. Chou SH, Lin CP, Lin YC, Kuo CT, Lin MS, **Chang CJ***. Double guiding catheters for complex percutaneous coronary intervention. *Tex Heart Inst J.* 2012; 39(1): 112-5.
46. Lee HF, Hsu TS, Ho WJ, Lin CP, Wang CL, **Chang CJ**, Tsai HY, Hsu LA*. BMPR2 mutations in six Taiwanese patients with idiopathic pulmonary arterial hypertension. *Acta Cardiol Sin.* 2012; 28(3): 249-54.
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51. Lee HF, Hsu LA, Chan YH, Wang CL*, **Chang CJ**, Kuo CT. Prognostic value of global left ventricular strain for conservatively treated patients with symptomatic aortic stenosis. *J Cardiol.* 2013; 62(5): 301-6.
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- ventricular antiarrhythmic actions of CIJ-3-2F, a novel benzyl-furoquinoline vasodilator in rat heart. *Br J Pharmacol*. 2014; 171(16): 3918-37.
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54. Lee HF, Hsu LA, **Chang CJ**, Chan YH, Wang CL*, Ho WJ, Chu PH. Prognostic significance of dilated inferior vena cava in advanced decompensated heart failure. *Int J Cardiovasc Imaging*. 2014; 30(7): 1289-95.
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56. Pan MW, Chen SY, Chen CC, Chen WJ, **Chang CJ**, Lin CP, Weng YM*, Chen YC. Implementation of multiple strategies for improved door-to-balloon time in patients with ST-segment elevation myocardial infarction. *Heart Vessels*. 2014; 29(2): 142-8.
57. Hsiao FC, Yeh YH, Chen WJ, Chan YH, Kuo CT, Wang CL, **Chang CJ**, Tsai HY, Tsai FC, Hsu LA*. MMP9 Rs3918242 Polymorphism Affects Tachycardia-Induced MMP9 Expression in Cultured Atrial-Derived Myocytes but Is Not a Risk Factor for Atrial Fibrillation among the Taiwanese. *Int J Mol Sci*. 2016; 17(4): 521.
58. **Chang CJ**, Hsu HC, Ho WJ, Chang GJ, Pang S. JH, Chen WJ, Huang CC, Lai YJ. Cathepsin S promotes the development of pulmonary arterial hypertension. *Am J Physiol Lung Cell Mol Physiol* 317: L1–L13, 2019