

November 9, 2018

*CURRICULUM VITAE – **SHAUL ATAR, MD***

Personal details

Address: Nahariya, Israel

Place of Birth: Netanya, Israel

Marital status: Married. Father of 3 sons & 2 daughters

Citizenship: Israeli

Military Service: 1978-1981

Academic degrees:

- 1987 - BSc in Medical Sciences, Cum Laude, Technion, Haifa.
- 1991 - MD, Technion, Haifa.

Teaching & academic appointments:

- 2016 – current – **Chairman, Committee on Curriculum and Academic Policy**, Azrieli Faculty of Medicine, Bar Ilan University, Israel.
- 2016 – current – member, **Committee on Student Promotions and Professional Standards**, Azrieli Faculty of Medicine, Bar Ilan University, Israel.
- 2013 - 2016 – **Chairman, Section of Cardiology, Azrieli Faculty of Medicine in the Galilee, Bar-Ilan University, Israel.**
- 2011 – 2016 – **Member, Committee on Curriculum and Academic Policy**, Azrieli Faculty of Medicine, Bar Ilan University, Israel.
- 2016 - current – **Associate Professor of Medicine**, Faculty of Medicine, Bar Ilan University, Israel.
- 2011-2015 – **Senior Clinical Lecturer**, Faculty of Medicine, Bar Ilan University, Israel.
- 2009-2011 – **Senior Clinical Lecturer**, Faculty of Medicine, Technion, Haifa, Israel.
- 1/2005-12/2005 – **Visiting Associate Professor**, School of Medicine, University of Texas Medical Branch, Galveston, Texas, USA.
- 1993-1994 - **Clinical instructor**, Faculty of Medicine, Technion, Haifa, Israel.

Professional appointments:

- 09/2008 – current – **Director, Department of Cardiology**, Galilee Medical Center, Nahariya, Israel.
- 5-6/1997, 8/1999-12/2004, 1/2006-08/2008 – **Physician in charge, Cardiac Intensive Care Unit**, Cardiology Department, Ha'Emek Medical Center, Afula, Israel.
- 1/2005-12/2005 – **Attending Cardiologist, Cardiac Critical Care unit, Echocardiography & Non-invasive Cardiology unit**, Division of Cardiology, University of Texas Medical Branch, Galveston, Texas, USA.
- 7/1997-7/1999 - Save A Heart Foundation **research fellowship** in critical cardiac care and echocardiography, Division of Cardiology, Cedars-Sinai Medical Center, UCLA School of Medicine, Los Angeles, California, USA.
- 1994-1997 - Cardiology **clinical fellowship**, Ha'Emek Medical Center, Afula, Israel.
- 1990-1994 - **Residency** in internal medicine, Ha'Emek Medical Center, Afula, Israel.
- 1989-1990 - **Internship**, Ha'Emek Medical Center, Afula, Israel.

Administrative appointments:

- July 2010 – December 2013 - **Chairman, Research & Development Committee** – Galilee Medical Center, Nahariya.
- 2011 – current – member of the national appealing committee, Ministry of Health

Licensing:

- 1990 - Israeli Medical License #21551.
- 1992 - ECFMG certification #0-433-293-8.
- 1994 - Israeli Board of Internal Medicine, License #13722.
- 1997 - Israeli Board of Cardiology, License #15716.
- 2004-2006 – Texas State Board of Medical Examiners visiting professor permit #40602.

Professional Accreditation

- 2009 – Special Accreditation in Acute Cardiac Care of the European Society of Cardiology

Membership:

- 1989-present - Israel Medical Association.
- 1991-1994 - Israel Society of Internal Medicine.
- 1994-present - Israel Heart Society.
- 2013-present – Fellow of the European Society of Cardiology.
- 2014-present – European Society of Cardiology, Acute Cardiac Care Association (ACCA).
- 2011-present – Fellow of the American College of Cardiology

Public & professional activities:

- 2015 – 2017 - Member of the European Society of Cardiology Committee for Clinical Practice Guidelines (CPG).
- 2010 – 2013 – Observer for the Israel Heart Society of the Israel Society for the Prevention of Heart Attacks (ISPHA) executive board.
- 2010 – 2011 - Member of the national board examination committee in Cardiology.
- 2008 – current - Executive committee member of ACSIS (Acute Coronary Syndrome Israeli Survey).
- 4/2007-4/2009 – Secretary, Working Group on Acute Cardiac Care of the Israel Heart Society.
- 4/2003-4/2005 – Israel Heart Society executive board member.
- 2001 - 2012 – Board member, “Yad Lalev” foundation.
- 11/1985-10/1986 – Vice president, National Medical Students Association.
- 2/1984-11/1986 – Chairman, Medical Students Association, Technion, Haifa.

Honors:

- MD thesis, Technion, Haifa - Characteristics of infants and children with severe visual impairment and blindness - an epidemiological survey in a well-defined geographical region. **(Special award)**
- Excellence in Medical Teaching, 2017 – Azrieli Faculty of Medicine, Bar Ilan University.

Reviewer for peer-reviewed journals:

- European Heart Journal – Cardiovascular Pharmacology
- American Journal of Cardiology
- Kidney and Blood Pressure Research
- Quarterly Journal of Medicine
- Pacing and Clinical Electrophysiology (PACE)
- Journal of Electrocardiology
- Journal of Clinical Ultrasound
- Israel Medical Association Journal
- Acute Cardiac Care
- Cardiovascular Journal of Africa
- Case Reports in Cardiology

List of Publications

Peer-Review Journals

Basic research (Hypothesis-driven)

1. Birnbaum Y, **Atar S**, Luo H, Nagai T, Siegel RJ. Ultrasound has synergistic effects in vitro with tirofiban and heparin for thrombus dissolution. ***Thromb Res*** 1999;96:451-458.
2. Siegel RJ, **Atar S**, Fishbein MC, Brasch AV, Peterson TM, Nagai T, Pal D, Nishioka T, Chae JS, Birnbaum Y, Zanelli C, Luo H. Noninvasive, transthoracic, low-frequency ultrasound augments thrombolysis in a canine model of acute myocardial infarction. ***Circulation*** 2000;101:2026-2029.
3. Birnbaum Y, Iakobishvili Z, Porter A, Hasdai D, **Atar S**, Siegel RJ, Battler A. Microparticle-containing oncotic solutions augment in-vitro clot disruption by ultrasound. ***Thromb Res*** 2000;98:549-557.
4. **Atar S**, Luo H, Nagai T, Sahm RA, Fishbein MC, Siegel RJ. Arterial thrombus

- dissolution in vivo using a transducer-tipped, high-frequency ultrasound catheter and local low-dose urokinase delivery. *J Endovasc Ther* 2001;8:282-290.
5. **Atar S**, Luo H, Birnbaum Y, Nagai T, Siegel RJ. Augmentation of in-vitro clot dissolution by low frequency high-intensity ultrasound combined with antiplatelet and antithrombotic drugs. *J Thromb Thrombol* 2001;11:223-228.
 6. Birnbaum Y, Luo H, **Atar S**, Fishbein MC, Brasch AV, Nagai T, Pal D, Nishioka T, Chae JS, Zanelli C, Peterson TM, Siegel RJ. Non-invasive transthoracic low frequency ultrasound augments thrombolysis in a canine model of acute myocardial infarction- evaluation of the extent of ST-segment resolution. *J Thromb Thrombol* 2001;11:229-234.
 7. **Atar S**, Neuman Y, Miyamoto T, Chen M, Birnbaum Y, Luo H, Kobal S, Siegel RJ. Synergism of aspirin and heparin with a low-frequency non-invasive ultrasound system for augmentation of in-vitro clot lysis. *J Thromb Thrombol* 2003;15:165-169.
 8. Neuman Y, Rukshin V, Tsang V, **Atar S**, Miyamoto T, Luo H, Kobal S, Thompson T, Birnbaum Y, Horzewski M, Siegel RJ, Kaul S. Augmentation of in-stent clot dissolution by low frequency ultrasound combined with aspirin and heparin. An ex-vivo canine arteriovenous shunt study. *Thromb Res* 2003;112:99-104.
 9. **Atar S**, Ye Y, Lin Y, Freeberg SY, Nishi SP, Rosanio S, Huang MH, Uretsky BF, Perez-Polo JR, Birnbaum Y. Atorvastatin-induced cardioprotection is mediated by increasing inducible nitric oxide synthase and consequent S-nitrosylation of cyclooxygenase-2. *Am J Physiol Heart Circ Physiol* 2006;290:H1960-8.
 10. Rosanio S, Ye Y, **Atar S**, Rahman AM, Freeberg SY, Huang M, Uretsky BF, Birnbaum Y. Enhanced cardioprotection against ischemia-reperfusion injury with combining sildenafil with low-dose atorvastatin. *Cardiovasc Drug Ther* 2006;20:27-36.
 11. Ye Y, Lin Y, **Atar S**, Huang MH, Perez-Polo JR, Uretsky BF, Birnbaum Y. Myocardial protection by pioglitazone, atorvastatin and their combination: mechanisms and possible interactions. *Am J Physiol Heart Circ Physiol* 2006;291:H1158-69.
 12. **Atar S**, Siegel RJ, Akel R, Ye Y, Lin Y, Modi SA, Sewani A, Tuero E, Birnbaum Y.

- Ultrasound at 27 kHz increases tissue expression and activity of nitric oxide synthases in acute limb ischemia in rabbits. *Ultrasound Med Biol* 2007;33:1483-8.
13. Blumberg Y, Ertracht O, Gershon I, Bachner-Hinenzon N, Reuveni T, **Atar S**. High-intensity exercise training improves global and segmental strain in severe congestive heart failure. *J Card Fail* 2017;23:392-402.
 14. Shuster E, Ertracht O, **Atar S**. Molecular pathways underlying cardiac remodeling. *Trends Mol Med* (submitted).
 15. Jahshan F, Ertracht O, Abu-Amar A, Ronen O, Srouji S, Apel-Sarid L, Eisenbach N, **Atar S**, Sela E, Gruber M. A novel rat model for assessment of laryngo-tracheal injury following trans-oral intubation. *Int J Ped Otolaryn* 2018 Oct;113:4-10. doi: 10.1016/j.ijporl.2018.07.012. Epub 2018 Jul 10
 16. Daud E, Ertracht O, Awad J, Rotenberg A, Reuveni T, **Atar S**. The Synergistic Effect of Low-Frequency Ultrasound Combined with Spironolactone for Reduction of Fibrosis after Myocardial Infarction in Rats. *Ultrasound Med Biol* (submitted).
 17. Salman Kesner N, Zaltsman M, Ertracht O, **Atar S**. In-vitro assessment of the thrombolytic efficacy of therapeutic ultrasound. *Thromb Res* (submitted)

Clinical Descriptive Research

18. Tirosh E, Rudolph-Schnitzer M, **Atar S**, Jaffe M. Severe visual deficits in infancy in northern Israel: an epidemiological perspective. *J Pediatr Ophthalmol Strabismus* 1992;29:366-369.
19. Luboshitzky R, Dharan M, Qupty G, Dgani Y, **Atar S**, Flatau E. Endemic goiter in Ethiopian Jews - possible pathogenetic factors. *Isr J Med Sci* 1993;29:368-370.
20. Luboshitzky R, Dgani Y, **Atar S**, Qupty G, Rakover Y, Tamir A, Flatau E. Thyroid dysfunction and goiter among immigrants from Ethiopia. *Harefuah* 1994;127:289-293.
21. Luboshitzky R, Dgani Y, **Atar S**, Qupty G, Tamir A, Flatau E. Goiter prevalence in children immigrating from an endemic goiter area in Ethiopia to Israel. *J Pediatr Endocrinol Metab* 1995;8:123-125.

22. Luboshitzky R, **Atar S**, Qupty G, Tamir A, Dgani Y, Flatau E. Prevalence of diabetes mellitus and glucose intolerance in adult Ethiopian immigrants. *Harefuah* 1995;128:406-408.
23. **Atar S**, Nagai T, Birnbaum Y, Luo H, Harold JG, Naqvi ZT, Siegel RJ. The echocardiographic-Doppler findings in patients with penetrating aortic ulcers. *Am J Cardiol* 1999;83:133-135.
24. Nagai T, Luo H, **Atar S**, Siegel RJ. Intravascular ultrasound imaging of ruptured atherosclerotic plaques in coronary arteries. *Am J Cardiol* 1999;83:135-137.
25. Fan S, Nagai T, Luo H, **Atar S**, Naqvi TZ, Birnbaum Y, Lee S, Siegel RJ. Superiority of the combination of blood and agitated saline for routine contrast enhancement. *J Am Soc Echocardiogr* 1999;12:94-98.
26. **Atar S**, Chiu J, Forrester JS, Siegel RJ. Bloody pericardial effusion in the 1990's – is the cause cancerous, tuberculous or iatrogenic? *Chest* 1999;116:1564-1569.
27. **Atar S**, Cercek B, Nagai T, Luo H, Lewin HC, Naqvi TZ, Siegel RJ. Transthoracic stress echocardiography with transesophageal atrial pacing for bedside evaluation of inducible myocardial ischemia in patients with new onset chest pain. *Am J Cardiol* 2000;86:12-16.
28. **Atar S**, Nagai T, Cercek B, Naqvi TZ, Luo H, Siegel RJ. Pacing stress echocardiography: an alternative to pharmacological stress testing. *J Am Coll Cardiol* 2000;36:1935-1941.
29. Chiu J, **Atar S**, Siegel RJ. Comparison of serous and bloody pericardial effusion as an ominous prognostic sign. *Am J Cardiol* 2001;87:924-926.
30. Jeon DS, **Atar S**, Brasch AV, Luo H, Mirocha J, Naqvi TZ, Krauss R, Berman DS, Siegel RJ. Association of mitral annulus calcification, aortic valve sclerosis and aortic root calcification with abnormal myocardial perfusion single photon emission tomography in subjects aged ≤ 65 years old. *J Am Coll Cardiol* 2001;38:1988-1993.
31. **Atar S**, Jeon DS, Luo H, Siegel RJ. Mitral annular calcification - a marker of significant coronary artery disease in patients under 65 years old. *Heart* 2003;89:161-164.

32. Turgeman Y, **Atar S**, Suleiman K, Feldman A, Bloch L, Freedberg NA, Antonelli D, Jabaren M, Rosenfeld T. Diagnostic and therapeutic percutaneous cardiac interventions without on-site surgical backup – review of 11 years experience. *Isr Med Assoc J* 2003;5:89-93.
33. Chen M, Luo H, Miyamoto T, **Atar S**, Kobal S, Rahban M, Brasch AV, Makkar R, Neuman Y, Naqvi TZ, Tolstrup K, Siegel RJ. Correlation of echo-Doppler aortic valve regurgitation index with angiographic aortic regurgitation severity. *Am J Cardiol* 2003;92:634-635.
34. Turgeman Y, **Atar S**, Suleiman K, Bloch L, Rosenfeld T. Percutaneous balloon mitral valvuloplasty in patients with severe mitral stenosis and low transmitral diastolic pressure gradient. *Int J Cardiovasc Intervent* 2003;5:200-205.
35. **Atar S**, Feldman A, Darawshe A, Siegel RJ, Rosenfeld T. Utility and diagnostic accuracy of hand-carried ultrasound for emergency department evaluation of chest pain. *Am J Cardiol* 2004;94:408-9.
36. Antonelli D, **Atar S**, Freedberg NA, Rosenfeld T. Torsade de Pointes in patients on chronic amiodarone treatment: contributing factors and drug interactions. *Isr Med Assoc J* 2005;7:163-5.
37. Turgeman Y, **Atar S**, Suleiman K, Feldman A, Bloch L, Jabaren M, Rosenfeld T. Repeat balloon mitral valvuloplasty: rationale and feasibility. *Am J Cardiol* 2005;95:989-91.
38. Turgeman Y, **Atar S**, Feldman A, Jabaren M, Suleiman K, Bloch L, Rosenfeld T. “Frozen” posterior mitral leaflet in rheumatic mitral stenosis: incidence and impact on balloon mitral commissurotomy outcome. *J Heart Valve Dis* 2005;14:282-5.
39. **Atar S**, Cannon CP, Murphy SA, Rosanio S, Uretsky BF, Birnbaum Y. Statins are associated with lower risk of gastrointestinal bleeding in patients with unstable coronary syndromes: results from the OPUS-TIMI 16 trial. *Am Heart J* 2006;151:976.e1-6.
40. Kobal SL, Pollick C, **Atar S**, Miyamoto T, Aslanian N, Neuman Y, Tolstrup K, Naqvi

- TZ, Luo H, Macrum B, Siegel RJ. Stress echocardiography in octogenarians: transesophageal atrial pacing is accurate, safe and well-tolerated. **J Am Soc Echocardiogr** 2006;19:1012-1016.
41. McGehee JT, Rangasetty UC, **Atar S**, Barbagelata NA, Uretsky BF, Birnbaum Y. Grade 3 ischemia on admission electrocardiogram and chest pain duration predict failure of ST-segment resolution after primary percutaneous coronary intervention for acute myocardial infarction. **J Electrocardiol** 2007;40:26-33.
 42. **Atar S**, Rosanio S, Saeed M, Wagner GS, Fu Y, Birnbaum Y. ST depression with T-wave inversion in leads V₄-V₆ predicts high one-year mortality in non-ST elevation acute coronary syndrome. Insights from ECG analysis of the GUSTO-IIB trial. **Am J Cardiol** 2007;99:934-938.
 43. Wolak A, Yaroslavtsev S, Amit G, Birnbaum Y, Cafri C, **Atar S**, Gilutz H, Ilia R, Zahger D. Grade 3 ischemia on the admission electrocardiogram predicts failure of ST resolution and of adequate flow restoration after primary percutaneous coronary intervention for acute myocardial infarction. **Am Heart J** 2007;153:410-417.
 44. **Atar S**, Tolstrup K, Cercek B, Siegel RJ. *Chlamydia Pneumoniae* antibody titers and cardiac calcifications – a cross-sectional serological-echocardiographic correlative study. **Isr Med Assoc J** 2007;9:517-520.
 45. Adawi K, **Atar S**. Clinical Implications and Angiographic and Electrocardiographic Correlation of ST Segment Elevation in Leads V₇-V₉ in Patients with ST Elevation Myocardial Infarction. **Harefuah** 2008;147:587-590.
 46. Iakobishvili Z, Porter A, Battler A, Behar S, Roth A, **Atar S**, Boyko V, Mager A, Hasdai D. Effect of narcotic treatment on outcomes of acute coronary syndromes. **Am J Cardiol** 2010;105:912-6.
 47. Shturman A, Bickel A, **Atar S**. The Predictive Value of Filtered Signal-Averaged P-Wave ECG in Patients with Acute ST Elevation Myocardial Infarction. **Isr Med Assoc J** 2012;14:493-497.
 48. Beigel R, Matetzky S, Gavrielov-Yusim N, Fefer P, Gottlieb S, Zahger D, **Atar S**, Finkelstein A, Roguin A, Goldenberg I, Kornowski R, Segev A; for the ACSIS and

- ACSIS-PCI 2010 investigators. Predictors of High-Risk Angiographic Findings in Patients with Non ST-Elevation Acute Coronary Syndrome. **Catheter Cardiovasc Interv** 2014;83:677-683.
49. Bickel A, Snitkovski T, Eitan A, Ivry S, **Atar S**. The Effect of Pneumoperitoneum during Laparoscopic Surgery on Brain Natriuretic Peptide and Troponin Levels. **Am Surg** 2014;80:325-6.
 50. Bickel A, Shturman A, Sergeiev M, Ivry S, Eitan A, **Atar S**. The hemodynamic effect and safety of intermittent sequential pneumatic compression leg sleeves in patients with congestive heart failure. **J Card Fail** 2014;20:739-46.
 51. Abdallah R, **Atar S**. Etiology and Characteristics of Large Symptomatic Pericardial Effusion in a Community Hospital in the Contemporary Era. **QJM** 2014;107:363-368.
 52. Sabbag A, Matetzky S, Gottlieb S, Fefer P, Kohanov O, **Atar S**, Zahger D, Porter A, Koifman B, Goldenberg I, Segev A. Recent Temporal Trends in the Presentation, Management and Outcome of Women Hospitalized with Acute Coronary Syndromes. **Am J Med** 2015;128:380-388.
 53. Altman E, Rutsky O, Shturman A, Yampolski Y, **Atar S**. Anterior Parasternal Approach for Creation of Pericardial Window. **Ann R Coll Surg Engl** 2015;97:375-8.
 54. Hassan K, Hassan D, Shturman A, Rubinchik I, Fadi H, Shadi H, **Atar S**. The impact of sub-clinical over-hydration on left ventricular mass in peritoneal dialysis patients. **Int J Clin Exp Med** 2015;8:5890-5896.
 55. Shema-Didi L, Kristal B, Eizenberg S, Marzuq N, Sussan M, Feldman-Idov Y, Ofir P, **Atar S**. Prevention of Contrast Induced Nephropathy with Single Bolus Erythropoietin in Diabetic Patients with Chronic Kidney Disease Undergoing Coronary Interventions - A Randomized Controlled Trial. **Nephrology** 2016;21:295-300.
 56. Beigel R, Iakobishvili Z, Shlomo N, Segev A, Wintrob G, Zahger D, **Atar S**, Alcalai R, Aronson D, Gottlieb S, Goldenberg I, Asher E, Matetzky S. Contemporary Real World Use of the Novel P₂Y₁₂ Inhibitors in Patients with Acute Myocardial

- Infarction – A Treatment Paradox. *Cardiology* 2016;136:21-28.
57. Asher E, Fefer P, Sabbag A, Herscovici R, Regev E, Mazin I, Shlomo N, Zahger D, **Atar S**, Hammerman H, Polak A, Beigel R, Matetzky S. Prior Chronic Clopidogrel Therapy is Associated with Increased Adverse Events and Early Stent Thrombosis. *Thromb Haemost* 2016;115(2):433-8.
 58. Asher E, Abu-Much A, Goldenberg I, Segev A, Sabbag A, Mazin I, Shlezinger M, **Atar S**, Zahger D, Polak A, Beigel R, Matetzky S. Incidence and clinical features of early stent thrombosis in the era of new P2Y12 inhibitors (PLATIS-2). *PLOS One* 2016;11(6):e0157437. doi: 10.1371/journal.pone.0157437. eCollection 2016
 59. **Atar S**. Additional clinical benefit independent of study result or trial arm allocation to participants in multi-center randomized controlled trials. *Eur J Intern Med* 2016 Dec;36:e24-e25. doi: 10.1016/j.ejim.2016.08.031.
 60. Erez A, Goldenberg I, Sabbag A, Nof E, Zahger D, **Atar S**, Pollak A, Dobrecky-Merye I, Beigel R, Matetzky S, Glikson M, Beinart R. Temporal trends and outcomes associated with atrial fibrillation observed during acute coronary syndrome: Real-world data from the Acute Coronary Syndrome Israeli Survey (ACSIS), 2000-2013. *Clin Cardiol* 2017;40:275-280.
 61. Bartunek J, Terzic A, Davison BA, Filippatos GS, Radovanovic S, Beleslin B, Merkely B, Musialek P, Wojakowski W, Andreka P, Horvath IG, Katz A, Dolatabadi D, El Nakadi B, Arandjelovic A, Edes I, Seferovic PM, Obradovic S, Vanderheyden M, Jagic N, Petrov I, **Atar S**, Halabi M, Gelev VL, Shochat MK, Kasprzak JD, Sanz-Ruiz R, Heyndrickx GR, Nyolczas N, Legrand V, Guédès A, Heyse A, Moccetti T, Fernandez-Aviles F, Jimenez-Quevedo P, Bayes-Genis A, Hernandez-Garcia JM, Ribichini F, Gruchala M, Waldman SA, Teerlink JR, Gersh BJ, Povsic TJ, Henry TD, Metra M, Hajjar RJ, Tendera M, Behfar A, Alexandre B, Seron A, Stough WG, Sherman W, Cotter G, Wijns W; CHART Program. Cardiopoietic cell therapy for advanced ischemic heart failure: results at 39 weeks of the prospective, randomized, double blind, sham-controlled CHART-1 clinical trial. *Eur Heart J* 2016;38:648-660.
 62. Koifman E, Beigel R, Iakobishvili Z, Shlomo N, Biton Y, Sabbag A, Asher E, **Atar S**,

- Gottlieb S, Alcalai R, Zahger D, Segev A, Goldenberg I, Strugo R, Matetzky S. Impact of mobile intensive care unit use on total ischemic time and clinical outcomes in ST-elevation myocardial infarction patients - real-world data from the Acute Coronary Syndrome Israeli Survey. *Eur Heart J Acute Cardiovasc Care*. 2017 Jan 1:2048872616687097. doi: 10.1177/2048872616687097. [Epub ahead of print]
63. Shturman A, Vardi S, Bickel A, **Atar S**. The Very Long-Term Prognostic Value of Ventricular Late Potentials Post ST-Elevation Myocardial Infarction. *Isr Med Assoc J* 2017;19:246-250.
 64. Serhan M, Abdallah R, **Atar S**. Characteristics of Large Pericardial Effusion in a Well-Defined Geographical Region. *Harefuah* 2017;156:311-314.
 65. Shouval R, Hadanny A, Shlomo N, Iakobishvili Z, Unger R, Zahger D, Alcalai R, **Atar S**, Gottlieb S, Matetzky S, Goldenberg I, Beigel R. Machine Learning for Prediction of 30 day mortality after ST Elevation Myocardial Infarction: An Acute Coronary Syndrome Israeli Survey Data Mining Study. *Int J Cardiol* 2017;246:7–13.
 66. Fefer P, Beigel R, **Atar S**, Aronson D, Pollak A, Zagher D, Asher E, Iakobshvili Z, Shlomo N, Alcalay R, Einhorn-Cohen M, Segev A, Goldenberg I, Matetzky S. Outcomes of Patients Presenting With Clinical Indices of Spontaneous Reperfusion in ST-Elevation Acute Coronary Syndrome Undergoing Deferred Angiography. *J Am Heart Assoc*. 2017 Jul 25;6(7). pii: e004552. doi: 10.1161/JAHA.116.004552.
 67. Alnsasara H, Zahger D, Geva D, Matetzky S, Beigel R, Iakobishvili Z, Alcalai R, **Atar S**, Shimony A. Contemporary Determinants of Delayed Benchmark Timelines in Acute Coronary Syndrome in Men and Women – Insight from a National Multi-Center Survey. *Am J Cardiol* 2017 Aug 8. pii: S0002-9149(17)31291-2. doi: 10.1016/j.amjcard.2017.07.085. [Epub ahead of print]
 68. Ohana-Sarna-Cahan L, **Atar S**. Clinical Outcomes of Patients with Acute Coronary Syndrome and Moderate or Severe Chronic Anemia Undergoing Coronary Angiography or Intervention. *Eur Heart J Ac Cardiovasc Care* 2017 May 1:2048872617707959. doi: 10.1177/2048872617707959. [Epub ahead of print].
 69. Fink N, Nikolsky E, Assali A, Shapira O, Kassif Y, Barac YD, Finkelstein A, Eitan A,

- Danenberg H, Zahger D, Sahar G, **Atar S**, Raanani E, Bolotin G, Goldenberg I, Segev A. Revascularization Strategies and Survival in Patients with Multi-vessel Coronary Artery Disease. *Ann Thorac Surg* 2018 Sep 26. pii: S0003-4975(18)31322-5. doi: 10.1016/j.athoracsur.2018.07.070. [Epub ahead of print]
70. Muady G, Iakobishvili Z, Beigel R, Shlomo N, Goldenberg I, Matetzky S, Zahger D, Atar S. Additional predictive value of low admission hemoglobin levels over the GRACE score in patients with acute coronary syndrome. *J Cardiol* (in press)
 71. Blumberg Y, Amon E, Ertracht O, Hijazi B, Goldenberg I, Klempfner R, **Atar S**. The Effect of Two Training Protocols on Post-Exercise Lactate Clearance in Heart Failure Patients. A Randomized Prospective *Clinical Trial*. *Clin Res Cardiol* (submitted).
 72. Shlezinger M, Amitai Y, Goldenberg I, **Atar S**, Shechter M. Acute myocardial infarction severity, complications and mortality associated with lack of magnesium intake through consumption of desalinated sea water.
 73. Braester A, Samokhvalov A, Stemer G, Surui C, **Atar S**. Incidental high mean platelet volume can predict metabolic syndrome and pre-diabetes, but not cardiovascular disease. *Inter J Lab Hematology* (submitted).
 74. Moady G, Bickel A, Shturman A, Khader M, **Atar S**. The effect of intermittent sequential pneumatic compression sleeves on brain natriuretic peptide levels in patients with severely reduced ejection fraction. *Inter J Cardiol* (submitted).

Review papers

75. **Atar S**, Luo H, Nagai T, Siegel RJ. Ultrasonic thrombolysis: catheter-delivered and transcutaneous applications. *Eur J Ultrasound* 1999;9:39-54.
76. Siegel RJ, **Atar S**, Fishbein MC, Brasch AV, Peterson TM, Nagai T, Pal D, Nishioka T, Chae JS, Birnbaum Y, Zanelli C, Luo H. Noninvasive Transcutaneous low frequency ultrasound enhances thrombolysis in peripheral and coronary arteries. *Echocardiography* 2001;18:247-257.
77. **Atar S**, Luo H, Birnbaum Y, Hansmann D, Siegel RJ. The use of transducer-tipped

ultrasound catheter for recanalization of thrombotic arterial occlusions.

Echocardiography 2001;18:233-237.

78. Turgeman Y, **Atar S**, Rosenfeld T. The subvalvular apparatus in rheumatic mitral stenosis: methods of assessment and therapeutic implications. ***Chest*** 2003;124:1929-1936.
79. **Atar S**, Rosenschein U. Perspectives on the role of ultrasonic devices in thrombolysis. ***J Thromb Thrombol*** 2004;17:107-14.
80. Kobal SL, **Atar S**, Siegel RJ. Hand-carried ultrasound improves the bedside cardiovascular examination. ***Chest*** 2004;126:693-701.
81. **Atar S**, Uretsky BF, Birnbaum Y. Early post-thrombolysis catheterisation may be preferable to a conservative strategy for people with ST-elevation myocardial infarction. Commentary. ***Evidence Based Cardiovasc Med*** 2005;9:55-58.
82. Rosanio S, Schwarz ER, Ahmad M, Jammula P, Vitarelli A, Uretsky BF, Birnbaum Y, Ware DL, **Atar S**, Saeed M. Benefits, unresolved questions and technical issues of cardiac resynchronization therapy for heart failure. ***Am J Cardiol*** 2005;96:710-717.
83. **Atar S**, Birnbaum Y. Ischemia-induced ST segment elevation: classification, prognosis and therapy. ***J Electrocardiol*** 2005;38:(suppl)1-7.
84. Modi SA, Siegel RJ, Birnbaum Y, **Atar S**. Systematic overview and clinical applications of pacing atrial stress echocardiography. ***Am J Cardiol*** 2006;98:549-56.
85. **Atar S**, Barbagelata NA, Birnbaum Y. Electrocardiographic diagnosis of ST-elevation myocardial infarction. ***Cardiol Clin*** 2006;24:343-65.
86. **Atar S**, Barbagelata NA, Birnbaum Y. Electrocardiographic markers of reperfusion in ST elevation myocardial infarction. ***Cardiol Clin*** 2006;24:367-76.
87. Birnbaum Y, **Atar S**. Electrocardiogram risk stratification of non-ST-elevation acute coronary syndromes. ***J Electrocardiol*** 2006;17:s57-61.
88. Hod H, Halon D, Hammerman H, Hasdai D, Zahger D, Lewis BS, Mosseri M, **Atar S**. The new universal definition of myocardial infarction. ***Harefuah*** 2009;148:60-64.

89. **Atar S.** Telecardiology – Close to the Heart, But (Still) Out of Reach. *Isr Med Assoc J* 2011;13:496-7.
90. Ertracht O, Assaf M, **Atar S**, Binah O. The mitochondria as a target for cardioprotection in acute myocardial ischemia. *Pharmacol Ther* 2014;142:33-40.
91. Nieminen M, Dickstein K, Fonseca C, Serrano JM, Parissis J, Fedele F, Wikström G, Agostoni P, **Atar S**, Baholli L, Brito D, Colet JC, Èdes I, Gómez J, Gorjup V, Garza EH, Juanatey J, Karanovic N, Karavidas A, Katsytadze I, Kivikko M, Matskeplishvili S, Merkely B, Morandi F, Novoa A, Oliva F, Ostadal P, Pereira-Barretto A, Pollesello P, Rüdiger A, Schwinger R, Wieser M, Yavelov nI, Zymlński R. The patient perspective: quality of life in heart failure with frequent hospitalisations. *Int J Cardiol* 2015;191:256-264.

Case Reports

92. **Atar S**, Oberman AS, Ben Itzhak O, Flatau E. Recurrent nephrotic syndrome associated with Kimura's disease in a young non-oriental male. *Nephron* 1994;68:259-261.
93. **Atar S**, Luboshitzky R. Hypokalemic periodic paralysis - a rare presentation of thyrotoxicosis. *Harefuah* 1996;131:21-22.
94. **Atar S**, Bloch L, Rosenfeld T. Aortic valve mass and sudden blindness. *Postgrad Med J* 1998;74:309-310.
95. Kangavari S, Collinns J, Cercek B, **Atar S**, Siegel RJ. Tricuspid valve group B streptococcal endocarditis after an elective termination of pregnancy. *Clin Cardiol* 2000;23:301-303.
96. Brasch AV, **Atar S**, Siegel RJ. Clinical picture: thrombus in the left atrial appendage. *Lancet* 2001;357:266.
97. Turgeman Y, Bloch L, **Atar S**, Merin G, Rosenfeld T. Anginal syndrome due to giant unruptured sinus of Valsalva aneurysm. *Int J Cardiovasc Intervent* 2001;4:39-42.
98. Turgeman Y, **Atar S**, Rosenfeld T. "Cyanotic blue tongue" in severe rheumatic tricuspid regurgitation. *Isr Med Assoc J* 2001;3:286-287.

99. Naqvi TZ, Nagai T, **Atar S**, Siegel RJ. Early appearance of echo-contrast simulating an intracardiac shunt in a patient with liver cirrhosis and intrapulmonary shunting. *J Am Soc Echocardiogr* 2002;15:379-81.
100. **Atar S**, Rozner E, Rosenfeld T. Transient cardiac dysfunction and pulmonary edema in exertional heat stroke. *Mil Med* 2003;168:671-673.
101. **Atar S**, Antonelli D, Freedberg NA, Rosenfeld T. Torsade de Pointes and QT prolongation associated with a combination of loratadine and amiodarone. *Pacing Clin Electrophysiol* 2003;26:785-786.
102. Turgeman Y, Antonelli D, **Atar S**, Rosenfeld T. Massive transient pulmonary air embolism during pacemaker implantation under mild sedation: an unrecognized hazard of snoring. *Pacing Clin Electrophysiol* 2004;27:684-5.
103. Turgeman Y, **Atar S**, Reisner S. Severe mitral regurgitation due to infective endocarditis: do not miss the "hole". *Isr Med Assoc J* 2004;6:181-182.
104. **Atar S**, Bloch L, Rosenfeld T. "Myxomatous" mitral stenosis. *Heart* 2004 Dec;90:1421.
105. Turgeman Y, **Atar S**, Rosenfeld T. Fracture and migration of a sternal metal suture: a possible cause of post-coronary bypass intermittent chest pain. *Isr Med Assoc J* 2005;7:52.
106. Turgeman Y, **Atar S**, Bloch L, Jabaren M, Rosenfeld T. Severe mitral stenosis after Duran-ring implantation for myxomatous mitral regurgitation. *Isr med Assoc J* 2005;7:344-5.
107. Gupta R, **Atar S**, Schwarz ER, Uretsky BF, Birnbaum Y. Vineberg procedure for inadvertent injury to anomalous left anterior descending artery during tetralogy of Fallot repair: four decades later. *Tex Heart Inst J* 2006;33:98-9.
108. Nishi SPE, Barbagelata NA, **Atar S**, Birnbaum Y, Tuero E. Hypercalcemia-induced ST segment elevation mimicking acute myocardial infarction. *J Electrocardiol* 2006;39:298-300.
109. Gupta R, Jammula P, Huang M, **Atar S**, Ahmad M. An unusual complication after aortic valve replacement. *J Clin Ultrasound* 2006;34:361-364.

110. Turgeman Y, Suleiman K, **Atar S**. Multi-Vessel Acute Coronary Thrombosis and Occlusion – An Unusual Cause of Cardiogenic Shock. *J Invas Cardiol* 2007;19:e278–e280.
111. Antonelli D, **Atar S**, Bloch L. Hemoptysis after Subclavian Vein Puncture. *Harefuah* 2007;146:744.
112. Merla R, Reddy NK, Birnbaum Y, Qiu S, Ahmad M, **Atar S**. Clostridium Perfringes: A rare cause of infective endocarditis and aortic root abscess. *Hospital Physician* 2008;44:23-27.
113. Shturman A, Gellerman M, **Atar S**. Isolated Right Ventricular Myocardial Infarction from Occlusion of a Dominant Right Coronary Artery Mimicking Anterior Myocardial Infarction. *Isr Med Assoc J* 2013;15:252-253.
114. **Atar S**, Wishniak A, Shturman A, Shtiwi S, Brezins M. Fatal Association of Mechanical Valve Thrombosis with Dabigatran: Report of 2 Cases. *Chest* 2013;144:327-328.
115. Sela R, Gellerman M, Kalfon A, **Atar S**. Extreme Electrical Storm in a Patient with an Implantable Cardioverter Defibrillator. *Isr Med Assoc J* 2014;16:513-515.
116. Sela R, Gellerman M, **Atar S**, Kalfon E. His-Bundle Pacing: An Alternative Physiologic Site of Cardiac Pacing. *Isr Med Assoc J* 2017;19:657–658.
117. Sela R, Kalfon E, **Atar S**. Ablate and His Bundle Pace. *J Cardiol Cases* 2017;17:96-98. doi: 10.1016/j.jccase.2017.10.005. eCollection 2018 Mar.

Book Chapters

1. **Atar S**, Darovic GO, Siegel RJ. Cardiomyopathies and pericardial disease. In: Darovic GO, Franklin CM, eds. Handbook of hemodynamic monitoring. Philadelphia, PA: W. B. Saunders. 1999;343-366.
2. **Atar S**, Siegel RJ. Intravascular echocardiography. In: Pohost GM, O'Rourke RA, Berman DS, Shah PM, eds. Imaging in cardiovascular disease. Philadelphia, PA: Lippincott, Williams & Wilkins. 2000;97-114.
3. **Atar S**, Darovic GO, Siegel RJ. Cardiomyopathies and pericardial disease. In: Darovic GO,

ed. Hemodynamic monitoring: invasive and noninvasive clinical application, 2nd ed. Philadelphia, PA: W. B. Saunders. 2002;601-36.

4. **Atar S**, Siegel RJ, Darovic GO. Cardiomyopathies and pericardial disease. In: Darovic GO, ed. Handbook of hemodynamic monitoring, 3rd ed. Philadelphia, PA: W. B. Saunders. 2006;333-355.

Non Peer-Review Journals

1. Nagai T, Luo H, **Atar S**, Tabak SW, Siegel RJ. Intravascular imaging of myocardial bridge. ***Cardiovascular Interventions Online*** #1, May 1998.
2. **Atar S**, Luo H, Nagai T, Siegel RJ. Catheter delivered ultrasonic thrombolysis. ***Cardiovascular Interventions Online*** #3, January 1999.
3. Nagai T, **Atar S**, Luo H, Siegel RJ. New developments in contrast echocardiography. ***Cardiovascular Interventions Online*** #4, May 1999.
4. **Atar S**, Birnbaum Y. Differential diagnosis of ST segment elevation pattern. ISHNE/ISCP internet symposium on current approaches for the assessment and management of myocardial infarction and ischemia. January 2008. www.smyocardial.ischemia-symposium.org
5. Kalfon E, **Atar S**. Cardiovascular disease in diabetic patients. ***Medicine***, 2011, Vol. 11, 6-10.
6. **Atar S**. An update on ST elevation acute coronary syndrome. ***Harefuah Update***, November 2011, 25-26.