Fred S Apple

List of Publications by Citations

109 papers	6,172 citations	41 h-index	77 g-index
120 ext. papers	7,226 ext. citations	6.2 avg, IF	5.77 L-index

#	Paper	IF	Citations
109	Analytical characteristics of high-sensitivity cardiac troponin assays. *Clinical Chemistry*, **2012**, 58, 54-61	5.5	611
108	Predictive value of cardiac troponin I and T for subsequent death in end-stage renal disease. *Circulation*, **2002**, 106, 2941-5	16.7	412
107	Future biomarkers for detection of ischemia and risk stratification in acute coronary syndrome. *Clinical Chemistry*, **2005**, 51, 810-24	5.5	340
106	High-sensitivity cardiac troponin I at presentation in patients with suspected acute coronary syndrome: a cohort study. *Lancet, The*, **2015**, 386, 2481-8	40	293
105	High sensitivity cardiac troponin and the under-diagnosis of myocardial infarction in women: prospective cohort study. *BMJ, The*, **2015**, 350, g7873	5.9	256
104	Clinical Laboratory Practice Recommendations for the Use of Cardiac Troponin in Acute Coronary Syndrome: Expert Opinion from the Academy of the American Association for Clinical Chemistry and the Task Force on Clinical Applications of Cardiac Bio-Markers of the International Federation of Clinical Chemistry and Laboratory Medicine. *Clinical Chemistry*, **2018**, 64, 645-655	5.5	211
103	Cardiac Troponin Assays: Guide to Understanding Analytical Characteristics and Their Impact on Clinical Care. *Clinical Chemistry*, **2017**, 63, 73-81	5.5	202
102	Multi-biomarker risk stratification of N-terminal pro-B-type natriuretic peptide, high-sensitivity C-reactive protein, and cardiac troponin T and I in end-stage renal disease for all-cause death. *Clinical Chemistry*, **2004**, 50, 2279-85	5.5	175
101	Cardiac troponin I, cardiac troponin T, and creatine kinase MB in dialysis patients without ischemic heart disease: evidence of cardiac troponin T expression in skeletal muscle. *Clinical Chemistry*, **1997**, 43, 976-982	5.5	172
100	National Academy of Clinical Biochemistry and IFCC Committee for Standardization of Markers of Cardiac Damage Laboratory Medicine Practice Guidelines: Analytical issues for biochemical markers of acute coronary syndromes. *Circulation*, **2007**, 115, e352-5	16.7	171
99	Quality specifications for B-type natriuretic peptide assays. *Clinical Chemistry*, **2005**, 51, 486-93	5.5	161
98	High-sensitivity troponin in the evaluation of patients with suspected acute coronary syndrome: a stepped-wedge, cluster-randomised controlled trial. *Lancet, The*, **2018**, 392, 919-928	40	144
97	Use of the Centaur TnI-Ultra assay for detection of myocardial infarction and adverse events in patients presenting with symptoms suggestive of acute coronary syndrome. *Clinical Chemistry*, **2008**, 54, 723-8	5.5	134
96	Release Characteristics of Cardiac Biomarkers and Ischemia-modified Albumin as Measured by the Albumin Cobalt-binding Test after a Marathon Race. *Clinical Chemistry*, **2002**, 48, 1097-1100	5.5	129
95	Copeptin helps in the early detection of patients with acute myocardial infarction: primary results of the CHOPIN trial (Copeptin Helps in the early detection Of Patients with acute myocardial INfarction). *Journal of the American College of Cardiology*, **2013**, 62, 150-160	15.1	127
94	Myocardial Infarction Redefined: Role of Cardiac Troponin Testing. *Clinical Chemistry*, **2001**, 47, 377-379	5.5	124
93	Association of High-Sensitivity Cardiac Troponin I Concentration With Cardiac Outcomes in Patients With Suspected Acute Coronary Syndrome. *JAMA - Journal of the American Medical Association*, **2017**, 318, 1913-1924	27.4	117

92	Multicenter Evaluation of an Automated Assay for Troponin I. *Clinical Chemistry*, **2002**, 48, 869-876	5.5	96
91	RNA Expression of Cardiac Troponin T Isoforms in Diseased Human Skeletal Muscle. *Clinical Chemistry*, **1999**, 45, 2129-2135	5.5	96
90	Propofol-associated Rhabdomyolysis with Cardiac Involvement in Adults: Chemical and Anatomic Findings. *Clinical Chemistry*, **2000**, 46, 577-581	5.5	92
89	Multicenter Clinical and Analytical Evaluation of the AxSYM Troponin-I Immunoassay to Assist in the Diagnosis of Myocardial Infarction. *Clinical Chemistry*, **1999**, 45, 206-212	5.5	85
88	Effect of sprint cycle training on activities of antioxidant enzymes in human skeletal muscle. *Journal of Applied Physiology*, **1996**, 81, 1484-7	3.7	85
87	Multiple biomarker use for detection of adverse events in patients presenting with symptoms suggestive of acute coronary syndrome. *Clinical Chemistry*, **2007**, 53, 874-81	5.5	81
86	National Academy of Clinical Biochemistry and IFCC Committee for Standardization of Markers of Cardiac Damage Laboratory Medicine practice guidelines: Analytical issues for biomarkers of heart failure. *Circulation*, **2007**, 116, e95-8	16.7	68
85	Cardiac troponin changes to distinguish type 1 and type 2 myocardial infarction and 180-day mortality risk. *European Heart Journal: Acute Cardiovascular Care*, **2014**, 3, 317-25	4.3	65
84	Type 1 and 2 Myocardial Infarction and Myocardial Injury: Clinical Transition to High-Sensitivity Cardiac Troponin I. *American Journal of Medicine*, **2017**, 130, 1431-1439.e4	2.4	62
83	High-Sensitivity Cardiac Troponin and the Universal Definition of Myocardial Infarction. *Circulation*, **2020**, 141, 161-171	16.7	61
82	Patient selection for high sensitivity cardiac troponin testing and diagnosis of myocardial infarction: prospective cohort study. *BMJ, The*, **2017**, 359, j4788	5.9	60
81	Diagnosis of type 1 and type 2 myocardial infarction using a high-sensitivity cardiac troponin I assay with sex-specific 99th percentiles based on the third universal definition of myocardial infarction classification system. *Clinical Chemistry*, **2015**, 61, 657-63	5.5	55
80	Assessment of the multiple-biomarker approach for diagnosis of myocardial infarction in patients presenting with symptoms suggestive of acute coronary syndrome. *Clinical Chemistry*, **2009**, 55, 93-100	5.5	54
79	Decreased patient charges following implementation of point-of-care cardiac troponin monitoring in acute coronary syndrome patients in a community hospital cardiology unit. *Clinica Chimica Acta*, **2006**, 370, 191-5	6.2	54
78	Counterpoint: Standardization of cardiac troponin I assays will not occur in my lifetime. *Clinical Chemistry*, **2012**, 58, 169-71	5.5	53
77	Machine Learning to Predict the Likelihood of Acute Myocardial Infarction. *Circulation*, **2019**,	16.7	52
76	Biochemical Markers of Cardiac Injury in Normal, Surviving Septic, or Nonsurviving Septic Neonatal Foals. *Journal of Veterinary Internal Medicine*, **2005**, 19, 577-580	3.1	51
75	Myocardial Infarction Risk Stratification With a Single Measurement of High-Sensitivity Troponin I. *Journal of the American College of Cardiology*, **2019**, 74, 271-282	15.1	49

74	Increased cardiac troponin I as measured by a high-sensitivity assay is associated with high odds of cardiovascular death: the Minnesota Heart Survey. *Clinical Chemistry*, **2012**, 58, 930-5	5.5	49
73	Analysis of the Albumin Cobalt Binding (ACB) test as an adjunct to cardiac troponin I for the early detection of acute myocardial infarction. *Cardiovascular Toxicology*, **2001**, 1, 147-51	3.4	47
72	Liver and blood postmortem tricyclic antidepressant concentrations. *American Journal of Clinical Pathology*, **1988**, 89, 794-6	1.9	47
71	Specificity of B-Type Natriuretic Peptide Assays: Cross-Reactivity with Different BNP, NT-proBNP, and proBNP Peptides. *Clinical Chemistry*, **2017**, 63, 351-358	5.5	45
70	The applied statistical approach highly influences the 99th percentile of cardiac troponin I. *Clinical Biochemistry*, **2016**, 49, 1109-1112	3.5	45
69	Evidence-based Implementation of Free Phenytoin Therapeutic Drug Monitoring. *Clinical Chemistry*, **2000**, 46, 1132-1135	5.5	43
68	High-sensitivity cardiac troponin assays for cardiovascular risk stratification in the general population. *European Heart Journal*, **2020**, 41, 4050-4056	9.5	40
67	Single High-Sensitivity Cardiac Troponin I to Rule Out Acute Myocardial Infarction. *American Journal of Medicine*, **2017**, 130, 1076-1083.e1	2.4	36
66	Preliminary Evaluation of the Vitros ECi Cardiac Troponin I Assay. *Clinical Chemistry*, **2000**, 46, 560-576	5.5	35
65	Creatine kinase isoforms following isometric exercise. *Muscle and Nerve*, **1987**, 10, 41-4	3.4	33
64	Sex-Specific 99th Percentile Upper Reference Limits for High Sensitivity Cardiac Troponin Assays Derived Using a Universal Sample Bank. *Clinical Chemistry*, **2020**, 66, 434-444	5.5	32
63	Diagnostic Performance of High Sensitivity Compared with Contemporary Cardiac Troponin I for the Diagnosis of Acute Myocardial Infarction. *Clinical Chemistry*, **2017**, 63, 1594-1604	5.5	31
62	Prevention of Analytical False-Positive Increases of Cardiac Troponin I on the Stratus II Analyzer. *Clinical Chemistry*, **1997**, 43, 860-861	5.5	31
61	Cardiac troponin and natriuretic peptide analytical interferences from hemolysis and biotin: educational aids from the IFCC Committee on Cardiac Biomarkers (IFCC C-CB). *Clinical Chemistry and Laboratory Medicine*, **2019**, 57, 633-640	5.9	27
60	Release characteristics of cardiac biomarkers and ischemia-modified albumin as measured by the albumin cobalt-binding test after a marathon race. *Clinical Chemistry*, **2002**, 48, 1097-100	5.5	27
59	Incidence of Undetectable, Measurable, and Increased Cardiac Troponin I Concentrations Above the 99th Percentile Using a High-Sensitivity vs a Contemporary Assay in Patients Presenting to the Emergency Department. *Clinical Chemistry*, **2016**, 62, 1115-9	5.5	26
58	Delta changes for optimizing clinical specificity and 60-day risk of adverse events in patients presenting with symptoms suggestive of acute coronary syndrome utilizing the ADVIA Centaur TnI-Ultra assay. *Clinical Biochemistry*, **2012**, 45, 711-3	3.5	26
57	Sex-specific 99th percentiles derived from the AACC Universal Sample Bank for the Roche Gen 5 cTnT assay: Comorbidities and statistical methods influence derivation of reference limits. *Clinical Biochemistry*, **2017**, 50, 1073-1077	3.5	24

56	Assessment of the Diagnostic Accuracy of the TDx-FLM II to Predict Fetal Lung Maturity. *Clinical Chemistry*, **2002**, 48, 761-765	5.5	20
55	The state of cardiac troponin assays: looking bright and moving in the right direction. *Clinical Chemistry*, **2013**, 59, 1014-6	5.5	19
54	High-sensitivity cardiac troponin for screening large populations of healthy people: is there risk?. *Clinical Chemistry*, **2011**, 57, 537-9	5.5	19
53	Myeloperoxidase improves risk stratification in patients with ischemia and normal cardiac troponin I concentrations. *Clinical Chemistry*, **2011**, 57, 603-8	5.5	19
52	Use of the bioMÉrieux VIDAS troponin I ultra assay for the diagnosis of myocardial infarction and detection of adverse events in patients presenting with symptoms suggestive of acute coronary syndrome. *Clinica Chimica Acta*, **2008**, 390, 72-5	6.2	19
51	National Academy of Clinical Biochemistry and IFCC Committee for Standardization of Markers of Cardiac Damage Laboratory Medicine Practice Guidelines: analytical issues for biomarkers of heart failure. *Clinical Biochemistry*, **2008**, 41, 222-6	3.5	19
50	Clinical and analytical review of ischemia-modified albumin measured by the albumin cobalt binding test. *Advances in Clinical Chemistry*, **2005**, 39, 1-10	5.8	19
49	Cardiac Troponin T Is Not Detected in Western Blots of Diseased Renal Tissue. *Clinical Chemistry*, **2001**, 47, 782-783	5.5	18
48	Effectiveness of practices for improving the diagnostic accuracy of Non ST Elevation Myocardial Infarction in the Emergency Department: A Laboratory Medicine Best Practices systematic review. *Clinical Biochemistry*, **2015**, 48, 204-12	3.5	17
47	Cardiac troponin assays: analytical issues and clinical reference range cutpoints. *Cardiovascular Toxicology*, **2001**, 1, 93-8	3.4	16
46	Multiple biomarkers including cardiac troponins T and I measured by high-sensitivity assays, as predictors of long-term mortality in patients with chronic renal failure who underwent dialysis. *American Journal of Cardiology*, **2015**, 115, 1601-6	3	15
45	Creation of a Universal Sample Bank for Determining the 99th Percentile for Cardiac Troponin Assays. *journal of applied laboratory medicine, The*, **2017**, 1, 711-719	2	15
44	Improving the 510(k) FDA process for cardiac troponin assays: in search of common ground. *Clinical Chemistry*, **2014**, 60, 1273-5	5.5	14
43	The diagnostic utility of cardiac biomarkers in detecting myocardial infarction. *Clinical Cornerstone*, **2005**, 7 Suppl 1, S25-30		14
42	False-Positive Lysergic Acid Diethylamide Immunoassay Screen Associated with Fentanyl Medication. *Clinical Chemistry*, **2002**, 48, 205-206	5.5	14
41	Biomarkers Enhance Discrimination and Prognosis of Type 2 Myocardial Infarction. *Circulation*, **2020**, 142, 1532-1544	16.7	14
40	High-Sensitivity Cardiac Troponin on Presentation to Rule Out Myocardial Infarction: A Stepped-Wedge Cluster Randomized Controlled Trial. *Circulation*, **2021**, 143, 2214-2224	16.7	14
39	Cardiac Troponin Testing in Patients with COVID-19: A Strategy for Testing and Reporting Results. *Clinical Chemistry*, **2021**, 67, 107-113	5.5	14

38	Geographic distribution of xanthine oxidase, free radical scavengers, creatine kinase, and lactate dehydrogenase enzyme systems in rat heart and skeletal muscle. *American Journal of Anatomy*, **1991**, 192, 319-23		13
37	Searching for a BNP standard: Glycosylated proBNP as a common calibrator enables improved comparability of commercial BNP immunoassays. *Clinical Biochemistry*, **2017**, 50, 181-185	3.5	12
36	Electronic medical record-based performance improvement project to document and reduce excessive cardiac troponin testing. *Clinical Chemistry*, **2015**, 61, 498-504	5.5	11
35	Men are different than women: it's true for cardiac troponin too. *Clinical Biochemistry*, **2014**, 47, 867-8	3.5	10
34	Analytical issues for cardiac troponin. *Progress in Cardiovascular Diseases*, **2004**, 47, 189-95	8.5	10
33	Diagnostic and prognostic value of cardiac troponin I assays in patients admitted with symptoms suggestive of acute coronary syndrome. *Archives of Pathology and Laboratory Medicine*, **2004**, 128, 430-45		10
32	Type 2 myocardial infarction. Potential hazards of nomenclature systems: user discretion advised. *International Journal of Cardiology*, **2015**, 179, 373-4	3.2	9
31	Impact of biomarkers, proteomics, and genomics in cardiovascular disease. *Clinical Chemistry*, **2012**, 58, 1-2	5.5	9
30	Serial sampling of copeptin levels improves diagnosis and risk stratification in patients presenting with chest pain: results from the CHOPIN trial. *Emergency Medicine Journal*, **2016**, 33, 23-9	1.5	8
29	Biochemical markers of thrombolytic success. *Scandinavian Journal of Clinical and Laboratory Investigation*, **1999**, 59, 60-66	2	8
28	Best Practices for Monitoring Cardiac Troponin in Detecting Myocardial Injury. *Clinical Chemistry*, **2017**, 63, 37-44	5.5	7
27	Urine Creatinine Concentrations in Drug Monitoring Participants and Hospitalized Patients. *Journal of Analytical Toxicology*, **2016**, 40, 659-662	2.9	6
26	Heroin-related Deaths from the Hennepin County Medical Examiner's Office from 2004 Through 2015. *Journal of Forensic Sciences*, **2018**, 63, 191-194	1.8	5
25	Implementation of High-Sensitivity and Point-of-Care Cardiac Troponin Assays into Practice: Some Different Thoughts. *Clinical Chemistry*, **2021**, 67, 70-78	5.5	5
24	Multicenter assessment of a hemoglobin A1c point-of-care device for diagnosis of diabetes mellitus. *Clinical Biochemistry*, **2018**, 61, 18-22	3.5	5
23	Cardiac Troponin Thresholds and Kinetics to Differentiate Myocardial Injury and Myocardial Infarction. *Circulation*, **2021**, 144, 528-538	16.7	5
22	The new face of heroin. *American Journal of Emergency Medicine*, **2017**, 35, 1978-1979	2.9	4
21	The challenges and concerns companies face pertaining to the US Food and Drug Administration 510(k) process for cardiac biomarkers. *Clinical Chemistry*, **2012**, 58, 31-8	5.5	4

20	Tricyclic antidepressant fatality: postmortem tissue concentrations. *Journal of Toxicology: Clinical Toxicology*, **2001**, 39, 649-50		4
19	Clinical use of cardiac troponin for acute cardiac care and emerging opportunities in the outpatient setting. *Minerva Medica*, **2019**, 110, 139-156	2.2	4
18	Independent and combined effects of biotin and hemolysis on high-sensitivity cardiac troponin assays. *Clinical Chemistry and Laboratory Medicine*, **2021**, 59, 1431-1443	5.9	4
17	The utility of risk scores when evaluating for acute myocardial infarction using high-sensitivity cardiac troponin I. *American Heart Journal*, **2020**, 227, 1-8	4.9	3
16	Comparison of 0/3-Hour Rapid Rule-Out Strategies Using High-Sensitivity Cardiac Troponin I in a US Emergency Department. *Circulation: Cardiovascular Quality and Outcomes*, **2020**, 13, e006565	5.8	3
15	Neopterin: Still a Forgotten Biomarker. *Clinical Chemistry*, **2005**, 51, 1903-1903	5.5	3
14	Another reader comments on the same article:. *Clinical Chemistry*, **1998**, 44, 1786-1787	5.5	3
13	Lot-to-Lot Variation for Commercial High-Sensitivity Cardiac Troponin: Can We Realistically Report Down to the Assay Limit of Detection?. *Clinical Chemistry*, **2020**, 66, 1146-1149	5.5	3
12	Clinical biomarkers of cardiac injury: cardiac troponins and natriuretic peptides. *Toxicologic Pathology*, **2006**, 34, 91-3	2.1	2
11	Endurance Exercise Training Attenuates Natriuretic Peptide Release During Maximal Effort Exercise: Biochemical Correlates of the "Athlete Heart". *Journal of Applied Physiology*, **2018**,	3.7	2
10	Upper reference limits and percent measurable concentrations using a universal sample bank for high sensitivity cardiac troponin I using a point-of-care assay. *Clinical Biochemistry*, **2020**, 83, 89-91	3.5	1
9	3: Comparison of Point-of-Care and Central Laboratory Methods for the Measurement of Cardiac Troponin I in Patients With Suspected Acute Myocardial Infarction. *American Journal of Clinical Pathology*, **2015**, 143, A002-A002	1.9	1
8	DORA 94-96: Directory of Rare Analyses Jocelyn M. Hicks, Donald S. Young. Washington, DC: AACC Press, 1994, 439 pp., $80.00. ISBN 0-915274-72-8. *Clinical Chemistry*, **1995**, 41, 1549-1549	5.5	1
7	Serum creatine kinase isoenzyme measurements in master male and female marathon runners. *Research in Sports Medicine*, **1992**, 3, 237-242		1
6	Laboratory findings in a child with SARS-CoV-2 (COVID-19) multisystem inflammatory syndrome. *Clinical Chemistry and Laboratory Medicine*, **2021**, 59, e259-e261	5.9	1
5	Cardiac troponin: redefining the detection of myocardial infarction. *American Clinical Laboratory*, **2002**, 21, 32-4		1
4	A comparison of modelled serum cTnT and cTnI kinetics after 60 min swimming. *Biomarkers*,1-24	2.6	1
3	Biomarker Testing Considerations in the Evaluation and Management of Patients With Heart Failure: Perspectives From the International Federation of Clinical Chemistry and Laboratory Medicine Committee. *Journal of Cardiac Failure*, **2021**, 27, 1456-1461	3.3	0

2	Biomarkers in Cardiovascular Disease: Utility in Diagnosis, Risk Assessment, and Therapy. *Clinical Chemistry*, **2021**, 67, 1-3	5.5	0
1	Commentary. *Clinical Chemistry*, **2017**, 63, 1573-1574	5.5	