BIOGRAPHICAL SKETCH

NAME Eswar Krishnan, M.D. M. Phil	POSITION TITLE Assistant Professor of Medicine, in the tenure stream
eRA COMMONS USER NAME eswar_krishnan	

EDUCATION/TRAINING

INSTITUTION AND LOCATION	DEGREE	YEAR(s)	FIELD OF STUDY
University of Kerala, India	MB;BS	1994	Medicine
University of Cambridge, UK	M. Phil	1995	Epidemiology

A.POSITIONS AND HONORS: Appointments and Positions

1993 – 1994	Internship, Trivandrum Medical College Hospitals, India
1996 – 1997	Senior House Officer, Internal Medicine, Sheffield Medical School, UK
1996 – 1997	Senior House Officer, Cambridge Medical School, UK
1997 – 2002	Internship & Residency in Internal Medicine, The Chicago Medical School, IL
2000 – 2002	Fellowship in Rheumatology, Stanford University
2002-- 2005	Associate Rheumatologist, Arthritis and Osteoporosis Center, West Reading PA
2005	Member, Institutional Review Board, Reading Hospital and Medical Center, Reading PA
2005 –4/2008	Assistant Professor in Medicine , Division of Rheumatology and Clinical Immunology, Department of Medicine University of Pittsburgh School of Medicine, Pittsburgh, PA
2006 -- 2008	Chair: Risk-management sub-committee, UPMC Arthritis Network Risk management Subcommittee, University of Pittsburgh
2007 -- 2009	Member-Scientific Advisory Council, Study Section A. REF (American College of Rheumatology)
5/2008-present	Assistant Professor in Medicine, Division of Immunology & Rheumatology, Stanford University Medical School
5/2008-present	Director of Clinical Epidemiology, Division of Immunology & Rheumatology, Department of Medicine, Stanford University School of Medicine
5/2008-present	Faculty affiliate, Stanford Center for Longevity, Stanford University.

Honors: Indian Council for Medical Research Annual Research Awards for Epidemiology (1992,1993, 1994); Runner-up Gold Metal for academic proficiency, Trivandrum Medical School (1994); WHO Research Training Fellowship in Cancer Epidemiology (1994); Beverly Sackler Endowment Award, Cambridge University, UK (1995); American College of Rheumatology Distinguished Fellow Award (2002)

B.PUBLICATIONS: Peer-reviewed original research

1. Nair MK, Sankaranarayanan R, Krishnan E, Padmanabhan TK, Mayadevi S, Mathew A. Independent predictors of response and disease-free survival in oral cancer treated with radical radiation therapy. **Cancer** 1992; 69(9): 2221-6
2. Nair MK, Varghese C. Krishnan E, Sankaranarayanan R, Nair B. Survival in patients with multiple myeloma in Kerala. **National Medical Journal of India** 1993; 6(1): 7-10.
3. Krishnan E Coleman RE. Treatment and Survival in Mixed Mullerian Tumors of gynecological origin. **Clinical Oncology** 1998; 10(4): 246-9
4. Sokka T, Krishnan E, Hakkinenen A, Hannonen P. Functional disability in rheumatoid arthritis patients compared with a community population in Finland. **Arthritis Rheum** 2003;48(1)59-63
5. Neva MH, Isomäki P, Hannonen P, Kauppi M, Krishnan E, Sokka T. Early and extensive erosiveness in peripheral joints predicts atlantoaxial subluxations in patients with rheumatoid arthritis. **Arthritis Rheum** 2003; 48: 1808-13.

6. Krishnan E, Sokka T, Hannonen P. Smoking-gender interaction and risk of rheumatoid arthritis. **Arthritis Research and Therapy.** 2003 5:158-162.
7. Krishnan E. Smoking gender and rheumatoid arthritis: epidemiological clues to etiology. **Bone Joint Spine** 2003 ;70: (6) 496-502
8. Krishnan E, Fries JF. Reduction in long-term functional disability in Rheumatoid Arthritis from 1977-1998: A longitudinal study of 3035 patients. **Am J Med** 2003 115:371-376
9. Krishnan E, Fries JF. Measuring effectiveness of drugs in observational databanks: Promises and perils. **Arthritis Research and Therapy** 2004 , 6: 41-44
10. Krishnan E, Murtagh K, Cline D, et al. Attrition bias in rheumatoid arthritis databanks: A case study of 6346 patients in 11 databanks and 65,649 administrations of the Health Assessment Questionnaires. **J Rheumatol** 2004;31(7)1320-6
11. Krishnan E, Sokka T, Hakkinien A, Hubert H, Hannonen P. Normative values of HAQ disability index.: benchmarking disability in the general population **Arthritis Rheum** 2004;50(3)953-960
12. Sokka T, Hakkinen A, Krishnan E and Hannonen P Similar prediction of mortality by the health assessment questionnaire in patients with rheumatoid arthritis and the general population. **Ann Rheum Dis.** 2004;63(5):494-7.
13. Genovese MC, Chakravary E, Krishnan E, Moreland L. A randomized controlled trial of interferon-beta-1a (Avonex) in patients with rheumatoid arthritis: a pilot study [ISRCTN03626626]. **Arthritis Research and Therapy.** 2004 6:R73-R77
14. Fries JF, Krishnan E. Equipoise, design bias and randomized controlled trials: the elusive ethics of new drug development **Arthritis Research and Therapy** 2004;6:R250-R255
15. Pincus T, Keysor J, Sokka T, Krishnan E, Callahan L. Patient questionnaires and formal education level as prospective predictors of mortality over 10 years in 97% of 1416 patients with RA from 15 US private practices. **J Rheumatol** 2004;31(2):229-234
16. Krishnan E, Tugwell P, Fries JF Percentile benchmarks in patients with rheumatoid arthritis: Health Assessment Questionnaire as a quality indicator (QI). **Arthritis Research and Therapy** 2004;6:R505-R513
17. Krishnan E, Lingala B, Singh G**.** Declines in Mortality from Acute Myocardial Infarction in successive incidence and birth cohorts of patients with rheumatoid arthritis. **Circulation** 2004;110:1774-1779.
18. Krishnan E. Stroke subtypes among young patients with systemic lupus erythematosus. **Am J Med** 2005;118: 1415e1-1415e7.
19. Krishnan E, Hakkinen A, Sokka T, Hannonen P. Impact of age and comorbidities on the criteria for remission and response in rheumatoid arthritis. **Ann Rheum Dis** 2005;64(9):1350-2.
20. Krishnan E, Furst DE. Systemic sclerosis mortality in the United States: 1979-1998. **Eur J Epidemiol** 2005;20(10):855-61.
21. Krishnan E, Baker JF, Furst DE, Schumacher HR. Gout and the risk of acute myocardial infarction. **Arthritis Rheum** 2006;54(8):2688-96.
22. Krishnan E. Hospitalization and mortality of patients with systemic lupus erythematosus. **J Rheumatol** 2006;33(9):1770-4.
23. Krishnan E, Hubert HB. Ethnicity and mortality from systemic lupus erythematosus in the United States. **Ann Rheum Dis** 2006;65(11):1500-5.
24. Chakravarty EF, Nelson L, Krishnan E. Obstetric hospitalizations in the United States for women with systemic lupus erythematosus and rheumatoid arthritis. **Arthritis Rheum** 2006;54(3):899-907.
25. Shah M, Krishnan E**.** Sleep disordered breathing in young women with Fibromyalgia. **Journal of Clinical Rheumatology,** 2006;12(6):277-281**.**
26. Krishnan E, Kwoh CK, Schumacher RH, Kuller L. Hyperuricemia and the risk of hypertension among men without metabolic syndrome. **Hypertension** 2007; 49:1-2**.**
27. Krishnan E Fries JF Kwoh CK. Primary knee and hip arthroplasty among centenarians in the United States **Arthritis Rheum** 2007;57(6):1038-42
28. Baker JF, Schumacher R, Krishnan E. Hyperuricemia and peripheral vascular disease. **Angiology** 2007; 58(4):450-7
29. Ibrahim SA, Kwoh CK, Krishnan E. Characteristics of Emergency Admission Patients With Who Leave Acute-Care Hospitals Against Medical Advice. **American Journal of Public Health** 97(12)2204-8

30. Chung L, Krishnan E, Chakravarty EF. Hospitalizations and in-hospital mortality in patients with systemic sclerosis in the United States. **Rheumatology** 46(12):1808-13
31. Krishnan E, Lienesch D, Kwoh CK. A brief report of gout in ambulatory care settings in the United States. **J Rheumatol**. 2008 Mar;35(3):498-501.
32. Avram Z, Krishnan E. Hyperuricemia: Where rheumatologist meets nephrologist **Rheumatology (Oxford).** 2008 Apr 27. [Epub ahead of print]
33. Wu E, Patel P, Yu A, Mody R, Cahill K, Tang J Krishnan E. Disease-related and all-cause health care costs of elderly patients with gout. **J Manag Care Pharm**. 2008 Mar;14(2):164-75
34. Krishnan E, Svendsen K, Neaton J Grandits G, Kuller L. Long-term cardiovascular mortality among middle-aged men with gout. **Arch Int Med** 2008;168(10):1104-1110
35. Choi HK, DeVera M, Krishnan E. Gout and the risk for diabetes. **Rheumatology(Oxford)** 2008 47(10) 1567-70
36. Shah M, Shah A, Krishnan E. Poor outcomes after acute myocardial infarction in Systemic Lupus Erythematosus. **J Rheumatology** *(in press)*
37. Wu E, Patel P, Yu A, Mody R, Cahill K, Tang J Krishnan E. Cost and Risk of Gout Flares among the Elderly: Does Serum Uric Acid Level Matter? **J Rheumatology** *(in press)*
38. Krishnan E Hyperuricemiaand incident heart failure **Circulation: Heart failure** *(revision submitted)*
39. Domsic R, Krishnan E. Mortality outcomes after arthroplasty in SLE**. Arthritis Rheum** *(revision submitted)*

Invited Reviews/chapters in text books (7 Total)

40. Krishnan E, Soman CR. Buerger's Disease: The case for an aggressive prevention strategy. Kerala Medical Journal 1991; 33:4:108
41. Day NE, Krishnan E. Epidemiology of Gynecological cancers. In: Soutter (Ed) Shaw's Textbook of Gynaecology Churchill Livingstone. Edinburgh April 1997
42. Krishnan E, Singh G, Tugwell P. Long-term observational studies. In: Smolen J, Lipsky P, eds. Targeted therapies in rheumatology. London: Martin Dunitz; 2003, pp 667-677.
43. Sokka T, Krishnan E. Musculoskeletal disorders and the national health and nutrition examination surveys (NHANES). In: Choi HK (Eds) Rheumatic disease clinics of North America 2004:30(4)869-78.
44. Baker JF, Krishnan E, Chen L, Schumacher HR. Serum uric acid and cardiovascular disease: recent developments, and where do they leave us? **Am J Med** 2005;118(8):816-26.
45. Avram Z, Krishnan E. Hyperuricemia: Where rheumatologist meets nephrologist **Rheumatology (Oxford).** 2008;47(7):960-4
46. Krishnan E Gout and coronary artery disease: epidemiologic clues **Curr Rheum Rep** 2008;10(3):249-55

Published abstracts (Selected from >30)

1. Fries JF, Bruce B, Rose M, Krishnan E. Progress in assessing disability in arthritis patients: Computerized adaptive testing (CAT). Arthritis And Rheumatism 2008;58:S914-S915.
2. Chakravarty EF, Krishnan E. Obstetric hospitalizations in the United States for women with SLE and RA. Arthritis And Rheumatism 2005;52:991.
3. Shah MA, Krishnan E. Sleep disordered breathing is widely prevalent among patients with fibromyalgia syndrome. Arthritis And Rheumatism 2005;52:1378.
4. Krishnan E, Griffith C, Kwoh K. Burden of illness from gout in ambulatory care in the United States. Arthritis And Rheumatism 2005;52:1770.
5. Neva MH, Isomaki P, Kauppi M, Hannonen P, Krishnan E, Sokka T. Early and extensive erosiveness in peripheral joints predicts atlantoaxial subluxations in patients with rheumatoid arthritis. Annals Of The Rheumatic Diseases 2003;62:162-162.
6. Sokka T, Hakkinen A, Krishnan E, Hannonen P. The HAQ predicts mortality not only in patients with rheumatoid arthritis but also community population. Annals Of The Rheumatic Diseases 2003;62:361-361.
7. Sokka T, Krishnan E, Hannonen R. Pain is prevalent in women with rheumatoid arthritis and in community controls. Annals Of The Rheumatic Diseases 2004;63:432-432.
8. Chakravarty EF, Genovese MC, Krishnan E, Moreland LW. A phase II trial of interferon beta 1-a (AVONEX) in patients with rheumatoid arthritis - A pilot study. Arthritis And Rheumatism 2003;48:207.

9. Sokka T, Krishnan E, Hakkinen AA, Hannonen P. Disabitity in patients with rheumatoid arthritis is 8 times higher compared to population based controls in the central Finland district. Arthritis And Rheumatism 2002;46:S243-S243.
10. Krishnan E, Sokka T, Wang BWE, Singh G, Fries JF. Projections of long-term functional disability in patients with early rheumatoid arthritis (RA) diagnosed in the bear 2002: Desiderata for novel therapies. Arthritis And Rheumatism 2002;46:S530-S530.
11. Fries JF, Krishnan E. Estimates of functional disability averted by leflunomide treatment in rheumatoid arthritis. Arthritis And Rheumatism 2002;46:S539-S539.
12. Krishnan E, Singh G. Gender gap in cardiovascular mortality in rheumatoid arthritis. Arthritis And Rheumatism 2002;46:SY13.
13. Krishnan E, Holmes TH, Fries JF. Cumulative disability of rheumatoid arthritis patients with no end-of-study change in disability. Arthritis And Rheumatism 2001;44:554.

C.RESEARCH SUPPORT : Ongoing/Funded Research:

NIH U01 AR052158 (Fries) 09/28/04 - 07/31/09
Title: Improved Outcome Assessment in Arthritis and Aging
The major goals of this project are to develop psychometrically robust patient self-reported outcomes and to deploy these in various formats including a computerized adaptive testing(CAT) format.
Role: Co-I

Centocor (Krishnan) 07/01/08 - 06/30/10
Title: Declining Disability in Rheumatoid Arthritis since 1998: The Role of Biologic Agents
This study is expected to demonstrate that health outcomes from rheumatoid arthritis has improved over the past 2 decades and that a proportion of this decline may be attributable to biologic use.
Role: Co-PI

IMS Health Incorporated (Krishnan) 12/01/08 - 11/30/09
Dose Escalation and Outcomes of Anti-TNF Treatment for Rheumatoid Arthritis
The major goals of this project are to study the pharmacoepidemiology and dose escalation of biologic agents in the treatment of rheumatoid arthritis.
Role: Co-PI

ACR REF Career Development Award (Krishnan) 07/01/09 - 06/30/11
Title: Toxicity of Long-term Glucocorticoids in Old Age
The major goal of this project is to show that owing to frailty, older patients with rheumatoid arthritis at disproportionately greater risk for glucocorticoid related toxicity outcomes.
Role: PI

PhRMA Research Foundation (Krishnan) 02/10/2009-01/09/2011
Research Starter Grant: Frailty and drug toxicity
The major goal of this study is to develop a frailty index for older patients with rheumatoid arthritis and to examine how this can influence the risk for adverse outcomes.

Completed Research Support:
Roadmap K12 RR023267 NIH Roadmap/NCRR Kapoor (PI) 07/1/2006-05/01/2008
The major goal for this project was to study the relationship between fat derived cytokines and the risk for knee osteoarthritis. Role: Clinical Research Scholar