Rheumatoid Arthritis Age Comparisons -- Treat to Target

Dataset Introduction

Abstract

Rheumatoid arthritis (RA) patients in two age ranges who were receiving care at a clinic in Philadelphia are included. Variables include age and sex, several indicators of disease activity and whether or not patients were administered selected common treatments for RA. The dataset is suitable for simple data description, chi-square tests, unpaired t-tests, and Mann-Whitney U tests. Several variables are non-normally distributed and one is approximately normally distributed. There is extensive missing data. Importantly, for two variables, CDAI and DAS-28, missing data is informative as it indicates true non-receipt of these tests and is a focus of the comparisons of the younger and older age groups.

Background

With the availability of effective anti-RA agents, disease activity measurements can inform the specification of treatment and are part of an approach known as "treat to target". In this study, the authors sought to explore age differences in both disease activity measurement and treatment. Of interest was the possibility that elderly patients might be less likely to have their disease activity measured and less likely to receive aggressive treatment.

Study Objective

The authors hypothesized that rheumatologists are less likely to measure disease activity in elderly patients and less likely to treat them to minimal disease activity.

Study Design

The authors report this as a retrospective cohort design, suggesting that the study protocol calls for follow up. Here, however, the data represent cross sectional measurements collected over a period of 34 months.

Subjects & Variables

There are 71 elderly (75+ years) RA patients and 459 younger (40-70 years) RA patient "controls". The several year difference between the oldest of the young group and the youngest of the elderly group is presumably a design feature intended to yield a sharp "between groups" distinction. There are 14 variables (13 if ID isn't counted) including age, sex, years since diagnosis, several disease activity indices, and several possible treatments. Level of disease activity was measured using two ordinal scales, the CDAI and DAS28. For patients with both CDAI and DAS28 measurements, the highest disease activity class was used in calculating the level of disease activity as shown in the abstract.

Citation(s)

An unpublished abstract is included in the materials with permission. It differs in a few slight ways from the data used in this portal submission. Table 1 in the abstract is mostly replicable for the elderly group, although one additional elderly patient had been added by the time of the abstract. The younger, "control", group has 4

additional subjects with tests in the abstract and four more osteoporosis screenings. For table 2, users should be able to replicate the severity classification for the 17 elderly subjects using the rule given under subjects and variables plus the ranges in the data dictionary. The non-elderly group has 4 fewer with these tests (242 versus 246) and a few classified differently. You should get 46, 89, 79, and 28 in the 4 severity categories for the non-elderly using the present dataset.

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