Hudes, Estie

From: Hudes, Estie
Sent: Monday, February 22, 2016 9:56 PM
Subject: CAPS Methods Core seminar 03/11/2016; Jitendra Ganju, PhD: Making Clinical Trial Results Robust

If you are coming from outside CAPS, please make sure you read the information at the end of this message. Please make sure you RSVP to Estie Hudes prior to the seminar date.

Dear Methods Core seminar participants,

Our next seminar will take place in under three weeks, on March 11. Please note the day of the week and time. (Friday morning)..

Topic **Making Clinical Trial Results Robust**

Presenter: Jitendra Ganju, PhD
VP of Biometrics at Global Blood Therapeutics
South San Francisco

Time & Place: Friday, March 11, 10-11:30, 2016
(new) McKusick Conference room #3700
Mission Hall, 3rd floor
4th Street at 550 16th Street
San Francisco, CA 94158

Abstract: Clinical trials are a complex undertaking. A typical Phase 3 study recruits large numbers of patients (ranging from a few hundred to several thousand) and requires a large financial investment (ranging from $10s of millions to over $100 million). The wait time from enrollment to final results seems interminable (the timeframe is usually several years). Yet, our approach to inference is fragile. A single endpoint is pre-specified for efficacy which is formally analyzed by a single pre-specified method of analysis. Suppose after unblinding we find that the method of analysis was suboptimal. For example, for the well-known BHAT trial (beta blocker heart attack trial) Kosorok and Lin (JASA 1999) note that had a particular weighted logrank statistic, $G^{20,0}$, been used instead of the unweighted logrank, the trial could perhaps have been stopped 10 months earlier. During that period 58 placebo deaths and 36 treatment deaths occurred.

This talk proposes a way to make inferences robust. The idea is akin to how financial investments are made. Investment in a single stock, which is analogous to pre-specifying a single analysis method, is unwise. A better way is to hedge our bets. This means pre-specifying a combining function for multiple pre-specified test statistics for formal inference. The versatility of the combination method is manifold: inferences are robust; the combined test statistic can yield more power than the best performing single test; it can be used when the number of covariates exceeds the number of observations; in group sequential trials, the set of tests at one interim analysis may be different from that at another interim, making analyses more flexible; it permits simultaneous rejection of the null in an overall sample and in subgroups. The recommendation is to replace the practice of relying exclusively on a single test with multiple tests. Open areas for more research will be noted.
One part of the work is joint with Julie Ma (Gilead Sciences), Xinxin Yu (former PhD student at U. Wisconsin), and the rest is joint with Yunzhi Lin (Takeda Pharma) and Kefei Zhou (Amgen).

Bio: Bio: I'm VP of Biometrics at Global Blood Therapeutics, a biopharmaceutical company based in South San Francisco. Currently, I'm working with teams within GBT on planning trials for potential treatments for sickle cell disease and idiopathic lung fibrosis. In past decade I've also worked at Amgen, Gilead Sciences, and Hyperion Therapeutics. My entire 20+ year career since the completion of my dissertation has been in the pharma / biotech industry. I received my PhD in Statistics from the University of Delaware. My dissertation topic was on inherently restricted randomized trials that are inadvertently treated as fully randomized experiments. I've served as Associate Editor of Controlled Clinical Trials (now Contemporary Clinical Trials). Some of my published work includes topics such as inference from blinded data, stratification in clinical trials, increasing power by combining tests statistics testing the same hypothesis, bias in tests when randomization restrictions are caused by not re-setting factor levels. My research interests include multiple comparisons, and making clinical trial designs and inferences robust.

Hope to see many of you at the next seminar,
--Estie

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For building entrance at Mission Hall, please RSVP to *Estie Hudes* ahead of time.

The CAPS Methods Core activity can now be checked directly on the website:
http://caps.ucsf.edu/about/structure-cores/methods-core/

Materials from past Methods Core seminars can be found at
http://caps.ucsf.edu/about/structure-cores/methods-core/methods-core-seminars/

Directions to Mission Bay:
http://campuslifeservices.ucsf.edu/transportation/services/alternative_transportation/mission_bay_transit_options
Please note that you can only use the Red shuttle at 16th Street BART if you have a current UCSF ID badge.

Parking at Mission Bay:
http://campuslifeservices.ucsf.edu/transportation/services/parking/public_parking

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