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What's in a Name: Introduction to the BART Index

To the Editor:

Chronic obstructive pulmonary disease (COPD) is a disease that transcends specialties: internal medicine, pulmonary medicine, thoracic surgery, radiology, and so on. Its pathophysiology and management are taught in medical schools around the globe. The body mass index, airflow obstruction, dyspnea, and exercise capacity (BODE) index is a well-known, widely used mortality predictor that is extensively described in medical literature (1). It is a simple, yet important calculator that incorporates four factors to predict mortality in COPD: body mass index, obstruction measured by FEV_1, dyspnea measured by the Modified Medical Research Council Dyspnea Scale, and exercise capacity measured by a 6-minute-walk test (6MWT). Although similar tools exist to predict mortality in patients with COPD, the BODE index has been transcendent and is the most widely used (2). The index is synonymous with COPD. We believe its creator, Dr. Bartolome "Bart" R. Celli, should be the same. As a reflection of his lifetime achievement, we propose the BODE index be retitled the BART index.

Dr. Celli (Figure 1) has been recognized as a giant in chest medicine (3). In 2004, he published a seminal paper in the *New England Journal of Medicine* and introduced the medical fraternity to the BODE index (1, 3). Through the years, this index has become an integral component of COPD management. It is well cited and is prevalent in contemporary medical literature. A query of PubMed alone yields 77 unique publications with the BODE index in the title.

Figure 1. Bartolome Celli.

One of the advantages of the BODE index is the ease of its recollection: each letter represents a component that is accounted for in the score. A transition to the BART index would maintain this simplicity: body mass index, airway obstruction (measured by FEV_1), respiratory symptoms (measured by Modified Medical Research Council Dyspnea Scale), and treading (measured by 6MWT). It even may be easier to recall than the BODE index, as the letters that represent FEV_1 (airway obstruction vs. obstruction) and the 6MWT (treading vs. exercise) are more specific. Of course, we do not suggest any changes to the actual calculations themselves.

In summary, we believe this transition to the BART index from the BODE index maintains the spirit, essence, and science behind this important, ubiquitous calculator within thoracic medicine. This change will add to the legacy of the developer by honoring his name. In medicine, we have had a history of changing eponyms as a result of their dark pasts (4). It would be refreshing to make a change to reflect on brilliant success and focus on celebration. ■

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Atul C. Mehta, M.D.*
Sameer K. Avasarala, M.D.
Cleveland Clinic
Cleveland, Ohio

Gerard J. Criner, M.D.‡
Temple University
Philadelphia, Pennsylvania

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ORCID ID: 0000-0003-1123-1704 (S.K.A.).

*Corresponding author (e-mail: mehtaa1@ccf.org).
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Check for updates

Should We Avoid Saline in Sepsis? It's Probably Too Early to Definitively Conclude

To the Editor:

We read with great interest the study entitled "Balanced Crystalloids versus Saline in Sepsis: A Secondary Analysis of the SMART Clinical Trial" (1). This study shows an increase in mortality in patients with sepsis receiving saline compared with balanced crystalloids. An increase in major adverse kidney events within 30 days (MAKE30) has already been found in a subgroup analysis of patients with sepsis (2, 3).

However, we have some remarks to make. This study was not planned in the SMART (Isotonic Solutions and Major Adverse Renal Events Trial) study protocol. The primary outcome of this study was death from any cause in patients with sepsis in the medical ICU. Moreover, the clinical trial number cited by the authors (NCT02444988) corresponds to "Isotonic Solutions and Major Adverse Renal Events Trial in the Medical Intensive Care Unit (SMART-MED)," in which the primary outcome measure was MAKE30 in all medical ICU patients, not only in patients with sepsis; 30-day in-hospital mortality was a secondary outcome.

Some patients received nonassigned intravenous fluids before or after enrollment, and the volume of crystalloids administered was higher in the balanced crystalloids group at Days 3 and 7, as previously found in another study (4). The amount of saline seems to be associated with an increase in MAKE30, particularly in patients with sepsis (2, 3). In animal studies, chloride-containing solutions led to renal vasoconstriction and a decrease in the glomerular filtration rate. In their analysis, did the authors take into account the amount of crystalloids (particularly saline) received before ICU admission in both groups? Did the authors find a relationship between the volume of chloride or saline administered and the incidence of kidney injuries, as suggested in different studies (2, 4)?

Several vasopressors were administered to the patients and converted to norepinephrine equivalents. However, these drugs are not strictly equivalent, particularly with regard to inotropism, heart rate, severe arrhythmias, and perhaps lactate concentration (5, 6). Did the patients in both groups receive the same vasopressors?

We congratulate the authors for this interesting study, which provides important information about crystalloids in sepsis. These results should be confirmed by a randomized study. ■

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Gildas Gueret, M.D., Ph.D.*
Pascale Le Maguet, M.D.
Renaud Fabre, M.D.
Centre Hospitalier de Cornouaille
Quimper, France

Marc Laffon, M.D., Ph.D.
Centre Hospitalier Régional Universitaire Clocheville
Tours, France

ORCID ID: 0000-0002-4423-7582 (G.G.).

*Corresponding author (e-mail: gildas.gueret@gmail.com).

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