

# DIA/FDA Statistics Forum 2013 PDUFA V Statistical Topics and Emerging New Issues

Tutorials: April 28, 2013

Conference: April 29 to May 1, 2013

Bethesda North Marriott Hotel & Conference Center  
Bethesda, MD



## STEERING COMMITTEE CHAIRPERSONS

### Stephen E. Wilson, DrPH, CAPT, USPHS

Director, Division of Biometrics II  
Office of Biostatistics, OTS, CDER, FDA

### Walter W. Offen, PhD

Global Head of Statistical Innovation  
Data and Statistical Sciences  
AbbVie

## STEERING COMMITTEE

### Joan Buenconsejo, PhD

Statistics Team Lead, Division of Biometrics II,  
Office of Biostatistics, Office of Translational Science  
CDER, FDA

### Christy Chuang-Stein, PhD

Vice President, Statistics  
Pfizer Inc.

### José C. Pinheiro, PhD

Senior Director, Quantitative Decision Strategies  
Janssen Research and Development, LLC

### Estelle Russek-Cohen, PhD

Division Director, Division of Biostatistics,  
CBER, FDA

### Barry Schwab, PhD

Vice President, Clinical Biostatistics  
Janssen Research and Development, LLC

### Jerald S. Schindler, DrPH

Vice President, Biostatistics and Research Decision  
Sciences  
Merck Research Laboratories  
North American Co-Chair of the DIA Statistics SIAC

### Ram C. Tiwari, PhD

Associate Director, Office of Biostatistics  
Office of Translational Science  
CDER, FDA

### Joachim Vollmar, MS

Executive Consultant  
International Clinical Development Consultants LLC  
European Representative

## DIA WORLDWIDE HEADQUARTERS

800 Enterprise Road, Suite 200  
Horsham, PA 19044, USA

## WORLDWIDE OFFICES

Basel, Switzerland | Beijing, China | Tokyo, Japan  
Mumbai, India | Washington, DC, USA



## KEYNOTE SPEAKER

### Robert N. Rodriguez, PhD

Senior Director, Statistical  
Research and Development  
Past President, American  
Statistical Association  
SAS Institute



## KEYNOTE SPEAKER

### Janet Woodcock, MD

Director, Center for Drug  
Evaluation and Research  
FDA

Now in its seventh year, this unique workshop continues the dialogue on issues including FDA guidance development and regulatory science initiatives including PDUFA V initiatives. The dialogue will focus on statistical opportunities and challenges associated with data standards and innovative approaches to the design, monitoring, analysis and reporting of clinical trials and assessments of safety and effectiveness in the pre- and post-market settings.

This conference will offer in-depth discussions on key topics relevant to the evaluation of therapeutic products and includes input from key thought leaders from regulatory agencies, industry, and academia.

## FEATURED SESSION TOPICS

- PDUFA V Overview
- Statisticians as Leaders
- Dichotomizing Continuous Measures for a Primary Efficacy Endpoint – Weighing the Benefits and Risks
- Measures for Primary Efficacy Endpoint – Are we Substantially Compromising Statistical Power?
- Pre-Competitive Collaboration
- Meta Analysis for Safety Data
- Companion Diagnostics
- (Premarketing) Benefit-risk Assessment in Clinical Development and Regulatory Review
- Health Technology Assessment and Comparative Effectiveness Research: Their Impact on Access to Pharmaceutical Products and Their Role in Designing Product Development Strategies
- Missing Data: When is it Important to Collect Data After Study Drug Discontinuation?
- Missing Data: Case Study Presentation and Panel Discussion
- Overview and Commentary of FDA Guidances: Multiplicity and/or Enriched Populations

## WHO SHOULD ATTEND

- Statisticians
- Clinicians
- Epidemiologists
- Pharmacometricians
- Drug safety professionals
- Regulatory and medical communication scientists

## LEARNING OBJECTIVES

At the conclusion of this conference, participants should be able to:

- Recognize innovative statistical solutions to issues associated with the evidence and regulatory review of medical products
- Describe the application of statistical methodologies and thinking to the development of new medical products
- Assess the impact of regulations and guidance on statistical practice
- Discuss ideas for improving the communication between industry Statisticians and Reviewers

In collaboration with:



Co-sponsored by:



This year's program will offer additional avenues for interaction and scientific discourse via a **scientific poster session** and an interactive **round-table luncheon event**.

This program will be developed by FDA and the DIA Statistics Community.

## CONTINUING EDUCATION CREDITS



DIA is accredited by the Accreditation Council for Pharmacy Education as a provider of continuing pharmacy education. This program is designated for up to 21.5 contact hours or 2.125 continuing education units (CEU's).

Type of Activity: Knowledge

ACPE Credit Request Update

DIA is required by the Accreditation Council for Pharmacy Education (ACPE) to report pharmacy-requested CEUs through the CPE Monitor system. All ACPE-certified activity credit requests need to be submitted through DIA's My Transcript within 45-days post activity. Pharmacists will need to provide their National Association of Boards of Pharmacy (NABP) e-Profile ID and date of birth (MMDD) to ensure the data is submitted to the ACPE and NABP properly. If you need to obtain your NABP e-Profile, please visit <http://www.nabp.net/>.

DIA has been accredited as an Authorized Provider by the International Association for Continuing Education and Training (IACET), 1760 Old Meadow Road, Suite 500, McLean, VA 22102.



As an IACET Authorized Provider, Drug Information Association offers CEUs for its programs that qualify under the ANSI/IACET Standard. DIA is authorized by IACET to offer up to 2.4 CEUs for the program. Participants must attend the entire program and tutorial(s), in order to be able to receive an IACET statement of credit. No partial credit will be awarded.

### CONTINUING EDUCATION CREDIT ALLOCATION

Tutorials:

Tutorial #1, Statistical Methods for Safety Surveillance: IACET: .3 CEUs

Tutorial #2, Missing Data in Clinical Trials: IACET: .3 IACET

Tutorial #3, Benefit-risk Evaluation: Pharmacy: 3.25 contact hours or .325 CEUs, 0286-0000-13-047-L04-P; IACET: .3 CEUs

Forum:

IACET: 1.8 CEUs

Pharmacy:

Day 1: 6.25 contact hours or .625 CEUs, 0286-0000-13-048-L04-P

Day 2: 6 contact hours or .6 CEUs, 0286-0000-13-049-L04-P

Day 3: 6 contact hours or .6 CEUs, 0286-0000-13-050-L04-P

If you would like to receive a statement of credit, you must attend the program and tutorial, if applicable, scan your name badge at the DIA registration desk each day of the program, and complete the on-line credit request process through My Transcript. To access My Transcript, please go to [www.diahome.org](http://www.diahome.org), select "Login to My DIA" and you will be prompted for your user ID and password. Select "My Transcript" (left side bar) and "Credit Request" to process your credit request. Participants will be able to download a statement of credit upon successful submission of the credit request. My Transcript will be available for credit requests on Wednesday, May 15, 2013.

### Disclosure Policy

It is DIA policy that anyone in a position to control the content of a continuing education activity must disclose to the program audience (1) any real or apparent conflict(s) of interest related to the content of their presentation and/or the educational activity, and (2) discussions of unlabeled or unapproved uses of drugs or medical devices. Faculty disclosures will be included in the course materials.

### Americans with Disabilities (ADA)

Reasonable accommodations will be made available to persons with disabilities who attend an educational activity. Contact the DIA office in writing at least 15 days prior to event to indicate your needs

Unless otherwise disclosed, the statements made by speakers represent their own opinions and not necessarily those of the organization they represent, or that of the Drug Information Association. Speakers, agenda, and CE information are subject to change without notice. Recording of any DIA educational material in any type of media, is prohibited without prior written consent from DIA. To view DIA's Grievance Policy, please visit the CE page on DIA's website at [www.diahome.org/CE](http://www.diahome.org/CE)



## DIA'S CERTIFICATE PROGRAM

This program is part of DIA's Certificate Program and is awarded the following:

- Clinical Research Certificate Program: 12 Elective Units
- Clinical Safety and Pharmacovigilance Certificate Program: 4 Elective Units

For more information go to  
[diahome.org/certificateprograms](http://diahome.org/certificateprograms)

## TUTORIAL DAY | SUNDAY, APRIL 28

9:00 AM – 12:30 PM

### TUTORIAL #1

#### Tutorial #1 – Statistical Methods for Safety Surveillance

##### TUTORIAL CHAIRPERSONS:

##### Ram Tiwari, PhD

Associate Director, Office of Biostatistics  
CDER, FDA

##### Jyoti Zalkikar, PhD

Mathematical Statistician - Team Leader  
Office of Biostatistics  
CDER, FDA

##### INSTRUCTORS:

##### Lan Huang, PhD

Mathematical Statistician  
Office of Biostatistics  
CDER, FDA

##### Ted Guo, PhD

Mathematical Statistician  
Office of Biostatistics  
CDER, FDA

The statistical methods used for data-mining or signal detection of drug-adverse event combinations from large drug safety databases such as FDA's Adverse Event Reporting System (AERS, now FAERS), consisting of spontaneous reports on adverse events for post-market drugs are called passive surveillance methods. On the other hand, the statistical signal detection methods for longitudinal data, as the data accrues in time, are called active surveillance methods. A review of the most commonly used passive surveillance statistical methods, along with a likelihood ratio test (LRT) based

method, recently developed by the instructors, will be discussed in detail. A live demo of the LRT tool on AERS data will be presented. Extensions of LRT for active surveillance will also be presented in detail.

The tutorial will consist of four modules. In Module-I, a review of commonly used Bayesian and Frequentist methods for signal detection in passive surveillance will be given. In Module-II, the LRT method will be discussed and a simulation study will be presented to assess the performance characteristics of LRT such as type-I error, false discovery rate, power and sensitivity. In Module-III, a live demonstration of the LRT tool to certain drugs (or drug classes) or adverse events (AEs) (or combinations of AEs) from the AERS database will be given, and the signals detected from the LRT method will be compared with the ones from some other commonly used methods. Finally, in Module-IV, extensions of the LRT methodology to a longitudinal clinical database and a brief discussion on how to handle excessive zeros in the data will be presented.

##### LEARNING OBJECTIVES:

- Explain commonly used methods for disproportionality analysis in drug safety database;
- Demonstrate a new method for disproportionality method that controls false positive and have good sensitivity and power, and a live demo of the accompanying tool, and;
- Review extensions of newly developed method to longitudinal data from active surveillance.

##### TARGET AUDIENCE:

Participants should have a fundamental knowledge of Statistics and Pharmacovigilance.

*Please note that lunch is not served on tutorial day*



## TO ACCESS PRESENTATIONS:

- Visit [diahome.org](http://diahome.org)
- Login at My DIA
- Enter your User ID and Password
- View 'My Presentation Downloads'

*Please Note: DIA User ID and Password are needed to access presentations. If you have forgotten your DIA User ID and Password, or this is your first time logging into the DIA website, please use our Login Reminder*

## 1:30 – 5:00 PM CONCURRENT TUTORIALS – #2 AND #3

**Tutorial #2 – Missing Data in Clinical Trials****INSTRUCTOR:****Roderick Little, PhD**

Biostatistics Department  
 Statistics Department  
 University of Michigan

This short course will discuss methods for the statistical analysis of data sets with missing values, emphasizing applications to clinical trials. Topics include: Definition of missing data; assumptions about mechanisms, including missing at random; pros and cons of simple methods such as complete-case analysis and imputation; weighting methods; maximum likelihood and Bayesian inference with missing data; multiple imputation; computational techniques, including EM algorithm and extensions, and Gibbs sampler; software for handling missing data; missing data in common statistical applications, including regression, repeated-measures analysis, clinical trials; selection and pattern-mixture models for nonrandom nonresponse; sensitivity analysis for deviations from missing at random.

Prerequisites: Course requires knowledge of standard statistical models such as the multivariate normal, multiple linear regression, contingency tables, as well as matrix algebra, calculus, and basic maximum likelihood for common distributions, at the level of Statistical Inference; 2nd Ed. by G. Cassella and R. L. Berger

**LEARNING OBJECTIVES:**

- Discuss methods for the statistical analysis of data sets that have missing values in clinical trials
- Discuss application of missing data methods in the context of missing data

## Recommended texts:

1. Little, R.J. and Rubin, D.B. (2002), Statistical Analysis with Missing Data, 2nd edition, Wiley.
2. National Research Council (2010). The Prevention and Treatment of Missing Data in Clinical Trials. National Academy Press: Washington DC. A pdf copy can be obtained without charge from the list of publications at <http://www7.nationalacademies.org/cnstat/>

**TARGET AUDIENCE:**

Statisticians, clinicians, and others working in clinical trials with an interest in how to address issues of missing data.

**Tutorial #3 – Benefit-risk Evaluation****INSTRUCTOR:****Scott Evans, PhD**

Senior Research Scientist  
 Harvard School of Public Health, Harvard University

**John Powers, MD**

National Institutes of Health

The monitoring and evaluation of Benefit-risk is a fundamental element of clinical trials and development programs. Despite Benefit-risk evaluation lying at the heart of this research, there is a need for improved evaluation through critical thought and more structured evaluation. We discuss the challenges to Benefit-risk assessment, review methods that have been proposed for Benefit-risk evaluation, and present ideas for improved design, monitoring, analyses, and reporting of benefits and risks. Methods for incorporating patient preferences and weighting outcomes, and novel ideas for tailored/ personalized medicine using within-patient analyses of benefits and risks will be presented.

**LEARNING OBJECTIVES:**

At the conclusion of this tutorial, participants should be able to:

- Recognize the challenges of Benefit-risk evaluation
- Discuss approaches to Benefit-risk evaluation that can be used as a foundation for building new approaches for improved design, monitoring, analyses, and reporting

**TARGET AUDIENCE:**

Statisticians, clinicians, and others working in clinical trials and development programs with interest in Benefit-risk evaluation.

## 6:00 PM GENERAL ATTENDEE REGISTRATION

**DIA 2013**  
 49<sup>th</sup> Annual Meeting  
 June 23-27 | Boston, MA

Register by May 17 to  
 Reserve Your Spot on the  
 Advance Attendee List

[diahome.org/DIA2013](http://diahome.org/DIA2013)



## FORUM DAY 1 | MONDAY, APRIL 29

7:30 – 8:45 AM REGISTRATION AND CONTINENTAL BREAKFAST

8:45 – 9:00 AM WELCOME AND OPENING REMARKS

**Stephen E. Wilson, DrPH, CAPT, USPHS**

Director, Division of Biometrics III  
Office of Biostatistics,  
Office of Translational Science  
CDER, FDA

**Walter W. Offen, PhD**

Global Head of Statistical Innovation  
Data and Statistical Sciences  
AbbVie

9:00 – 10:30 AM KEYNOTE ADDRESSES

**International Year of Statistics****Robert N. Rodriguez, PhD**

Senior Director, Statistical Research and Development  
Past President, American Statistical Association  
SAS Institute

**Janet Woodcock, MD**

Director, Center for Drug Evaluation and Research  
FDA

10:30 – 11:00 AM MORNING BREAK

11:00 – 12:30 PM SESSION 1

**PDUFA V Overview****Stephen J. Ruberg, PhD**

Distinguished Research Fellow  
Scientific Leader, Advanced Analytics  
Global Statistical Sciences  
Eli Lilly & Company

This session will discuss the key PDUFA V commitments, current plans for their implementation, areas of interest for statisticians in particular, and perspectives on the potential impact on stakeholders.

## SPEAKERS:

**Theresa Mullin, PhD**

Director, Office of Planning and Informatics  
CDER, FDA

**Jay P. Siegel, MD**

Chief Biotechnology Officer  
Head, Global Regulatory Affairs  
Janssen Research & Development, LLC

**Stephen E. Wilson, DrPH, CAPT, USPHS**

Director, Division of Biometrics III  
Office of Biostatistics  
Office of Translational Sciences  
CDER, FDA

**Lisa M. LaVange, PhD**

Director, Office of Biostatistics  
Office of Translational Sciences  
CDER, FDA

12:30 – 1:30 PM LUNCHEON

1:30 – 3:00 PM SESSION 2

## Missing Data: When is it Important to Collect Data After Study Drug Discontinuation?

SESSION CHAIRPERSONS:

### José C. Pinheiro, PhD

Senior Director, Quantitative Decision Strategies  
Janssen Research and Development, LLC

### John Scott, PhD

Acting Deputy Director, Division of Biostatistics  
Office of Biostatistics and Epidemiology  
CDER, FDA

This is an intertwined pair of sessions on missing data in clinical trials. In the first session, three expert speakers (from FDA, industry and academia) will address the questions, “When is it important to collect data after study drug discontinuation and how can it be done in practice?” The recent National Academy of Sciences panel report on The Prevention and Treatment of Missing Data in Clinical Trials recommended that sponsors continue to collect key outcome data on study participants after discontinuation of study drug, except when a cost-benefit analysis argues otherwise. However, the report also noted that the decision on continued data collection depends on the estimand and study design. The speakers in this session will discuss the whens, hows and whys of continued data collection after study drug termination.

In the second session, a case study in the collection of outcomes data after study drug termination will be presented, followed by a panel discussion involving the case study presenter, a discussant, and the three speakers from the previous session.

SPEAKERS:

### Thomas Permutt, PhD

Director, Division of Biostatistics II  
Office of Biostatistics  
Office of Translational Sciences  
CDER, FDA

### Craig H. Mallinckrodt, PhD

Research Fellow and Technical Lead  
Department of Strategy and Decision Science  
Eli Lilly

### Roderick Little, PhD

Biostatistics Department  
Statistics Department  
University of Michigan

3:00 – 3:30 PM AFTERNOON BREAK

3:30 – 5:00 PM SESSION 3

## Missing Data: Case Study Presentation & Panel Discussion

SESSION CHAIRPERSONS:

### José C. Pinheiro, PhD

Senior Director, Quantitative Decision Strategies  
Janssen Research and Development, LLC

### John Scott, PhD

Acting Deputy Director, Division of Biostatistics  
Office of Biostatistics and Epidemiology  
CDER, FDA

CASE STUDY PRESENTER:

### Rajeshwari Sridhara, PhD

Director, Division of Biometrics V  
Office of Biostatistics  
CDER, FDA

PANELISTS:

### Gary G. Koch, PhD

Director, Biometric Consulting Lab. Biostatistics  
Professor, University of North Carolina at Chapel Hill

### Craig H. Mallinckrodt, PhD

Research Fellow and Technical Lead  
Department of Strategy and Decision Science  
Eli Lilly

### Thomas Permutt, PhD

Director, Division of Biostatistics (DB) II  
Office of Biostatistics (OB)  
Office of Translational Sciences (OTS)  
CDER, FDA

### Jay P. Siegel, MD

Chief Biotechnology Officer  
Head, Global Regulatory Affairs  
Janssen Research & Development, LLC

## FORUM DAY 2 | TUESDAY, APRIL 30

7:30 – 8:30 AM REGISTRATION AND CONTINENTAL BREAKFAST

8:30 – 10:00 AM SESSION 4

**Statisticians as Leaders**

SESSION CHAIRPERSONS:

**Jerald S. Schindler, DrPH**

Vice President, Biostatistics and Research Decision Sciences  
Merck Research Laboratories  
North American Co-Chair of the DIA Statistics Community

**Joan Buenconsejo, PhD**

Statistics Team Lead  
Division of Biometrics II  
Office of Biostatistics  
Office of Translational Science  
CDER, FDA

In the last few years, we have seen a rapid expansion in the amount of data collected and analyzed in drug development. In addition to clinical trial results we also collect pk, pharmacogenomic, comparative effectiveness, observational data and reimbursement data. This expansion of data has resulted in a wider variety of research objectives and analyses performed during drug development. As the scope has increased, the range of departments involved in quantitative analyses has also increased dramatically. Now in addition to a central Biostatistics department, Epidemiology, Modeling & Simulation, Outcomes Research, Marketing among others are engaged in these Quantitative Analyses. This has created new challenges for pharmaceutical companies. In the past most Quantitative Analyses were coordinated by a centrally located Statistics Department. In the currently evolving model, Quantitative Analyses are distributed among many departments in the pharmaceutical company. Often, these departments have a specific functional expertise but only limited

Statistical expertise. This trend has begun to move the statistician in the direction of a support role. This session will explore this new trend and will also examine opportunities for statisticians to move back to a leadership role in drug development.

In this session, four leaders from regulatory agency, pharmaceutical industry and professional organization will engage in a conversation to share their thoughts and perspectives regarding these challenges. They will collectively discuss what are the stakes, the potential impact, and possible destination we can all strive for in our chosen profession. They will also engage the audience with an open dialogue about the ideal state of statistical leadership.

PANELISTS:

**Lisa M. LaVange, PhD**

Director, Office of Biostatistics  
Office of Translational Sciences  
CDER, FDA

**Robert N. Rodriguez, PhD**

Senior Director, Statistical Research and Development  
Past President, American Statistical Association  
SAS Institute

**Jerald S. Schindler, DrPH**

Vice President, Biostatistics and Research Decision Sciences  
Merck Research Laboratories  
North American Co-Chair of the DIA Statistics SIAC

**Aarti S. Shah, PhD**

Vice President, Biometrics & Advanced Analytics  
Eli Lilly & Co

10:00 – 10:30 AM MORNING BREAK

10:30 – 12:00 PM SESSION 5

**Dichotomizing Continuous Measures for a Primary Efficacy Endpoint – Weighing the Benefits and Risks**

SESSION CHAIRPERSONS:

**Steven M. Snapinn, PhD**

Vice President, Global Biostatistical Science  
Amgen Inc.

**Dionne Price, PhD**

Team Lead, Division of Biometrics II  
Office of Biometrics  
Office of Translational Sciences  
CDER, FDA

In many disease areas, it is common for an endpoint measured on a continuous scale to be dichotomized prior to analysis. Typically, a subject is classified as a responder or a non-responder on the basis of a measurement taken at the end of the treatment period or based on a change from baseline; for this reason, this approach is often referred to as a responder analysis. For example, in a trial of an antihypertensive treatment, a subject might be classified as a responder if he or she achieves a diastolic blood pressure value of 80 mmHg or less. While this approach has some appeal, it also has disadvantages, most notably a substantial cost in statistical power. In this session, two speakers will outline the rationale for the approach and some of the associated statistical issues. A panel discussion will follow whereby panelists will discuss varying views of the benefits and risks of dichotomizing continuous measures.

SPEAKERS:

**Lisa A. Kammerman, PhD**

Master Reviewer  
Office of Biostatistics  
Office of Translational Science  
CDER, FDA

**Qi Jiang, PhD**

Executive Director  
Global Biostatistical Science  
Amgen, Inc.

PANELISTS:

**Qi Jiang, PhD**

Executive Director  
Global Biostatistical Science  
Amgen, Inc.

**Lisa A. Kammerman, PhD**

Master Reviewer  
Office of Biostatistics  
Office of Translational Science  
CDER, FDA

**Gary G. Koch, PhD**

Director, Biometric Consulting Lab. Biostatistics  
Professor, University of North Carolina at Chapel Hill

**Stephen J. Ruberg, PhD**

Distinguished Research Fellow  
Scientific Leader, Advanced Analytics  
Global Statistical Sciences  
Eli Lilly & Company

**Rajeshwari Sridhara, PhD**

Director, Division of Biometrics V  
Office of Biostatistics  
CDER, FDA

**12:00 – 1:30 PM LUNCHEON AND ROUNDTABLE DISCUSSIONS**

## ROUNDTABLE CHAIRPERSONS:

**Tammy Massie, PhD**

Mathematical Statistician  
Division of Biostatistics  
CDER, FDA

**Brenda Crowe, PhD**

Research Advisor  
Global Statistical Sciences  
Eli Lilly and Company

**Carmen Mak, PhD**

Manager, Statistics  
Merck Research Laboratories

**Topics:**

1. Issues in dichotomizing a continuous variable
2. Innovative approaches for pre-licensure evaluation of safety
3. The design and analysis of meta-analysis for rare safety events
4. Practical missing data handling technique for clinical trial
5. Prevention and treatment of missing data: current practices
6. Multiplicity adjustment in confirmatory clinical trials
7. The use of freeware in FDA submissions and in further analyses
8. Effective use of table, figure, and listing in the study report of a clinical trial
9. Meta-analysis for safety data
10. Patient enrollment statistical prediction for clinical trial data monitoring
11. Using patient reported outcome (PRO) for product labels

**1:30 – 3:00 PM SESSION 6****(Premarketing) Benefit-Risk Assessment in Clinical Development and Regulatory Review**

## SESSION CHAIRPERSONS:

**Qi Jiang, PhD**

Executive Director  
Global Biostatistical Science  
Amgen, Inc.

**Jonathan D. Norton, PhD**

DB V  
Office of Biostatistics  
CDER, FDA

The evaluation of new pharmaceutical products involves careful assessments of both efficacy and safety, and, based on these evaluations, a product is deemed approvable if the benefits are determined to exceed the harms (risks). In recent years there has been a growing consensus that more formal methods are needed to make this comparison. In particular, PDUFA V calls for FDA to develop a structured Benefit-risk framework. As this framework is developed and implemented, statisticians have an important role to play in ensuring that quantitative results and reasoning are appropriately incorporated. While a number of quantitative methods for Benefit-risk assessment have been proposed, none have been universally accepted by regulators. In this session we will discuss various Benefit-risk assessment approaches that can be potentially used to meet the needs of global regulatory agencies and prescribers, as well as challenges that may arise in implementing them.

## SPEAKERS:

**Scott Evans, PhD**

Senior Research Scientist  
Harvard School of Public Health  
Harvard University

**Steven M. Snapinn, PhD**

Vice President, Global Biostatistical Science  
Amgen Inc

## PANELISTS:

**Frank Bretz, PhD**

Global Head of Statistical Methodology  
Novartis Pharma AG  
Switzerland

**Scott Evans, PhD**

Senior Research Scientist  
Harvard School of Public Health  
Harvard University

**Patrick Frey, MPP**

Director, Office of Planning and Analysis  
CDER, FDA

**Frank W. Rockhold, PhD**

Senior Vice President, Global Clinical Safety and Pharmacovigilance  
GlaxoSmithKline

**Steven M. Snapinn, PhD**

Vice President, Global Biostatistical Science  
Amgen Inc.

Eight-Part Monthly Webinar Series:  
**Assessing the Benefits and Risks of Medicines**  
*Register for two or more in this series and save 15%!*



3:00 – 3:30 PM AFTERNOON BREAK

3:30 – 5:00 PM SESSION 7

## Health Technology Assessment and Comparative Effectiveness Research: Their Impact on Access to Pharmaceutical Products and Their Role in Designing Product Development Strategies

SESSION CHAIRPERSONS:

### Christy Chuang-Stein, PhD

Vice President, Statistics  
Pfizer Inc.

### Estelle Russek-Cohen, PhD

Division Director, Division of Biostatistics,  
CDER, FDA

After a product received marketing authorizations, access to the product by the general public outside of the US is largely controlled by decisions from health technology assessment (HTA) agencies who determine if the product is cost-effectiveness for the indication authorized. While cost has not been a formal part of coverage decisions in health care systems supported by government in the US (e.g. Medicare, Medicaid), considerable attention has been paid to the subject of comparative effectiveness research (CER) since the Affordable Care Act was signed into law in 2010. In this session, we will look at issues associated with HTA and CER and how they need to be part of the overall considerations when designing a product development program.

SPEAKERS:

### Sally Morton, PhD

Professor and Chair, Biostatistics  
Department of Biostatistics  
University of Pittsburgh

### Richard J. Willke, PhD

Head, Global Health Economics & Outcomes Research Acting  
Head, Regional HE & OR  
Global Market Access Primary Care Business Unit  
Pfizer, Inc.

### Chrissie Fletcher

Executive Director, Biostatistics  
Amgen, Inc

5:00 – 7:00 PM NETWORKING RECEPTION AND POSTER SESSION

POSTER SESSIONS CHAIRPERSONS:

### Rima Izem, PhD

Mathematical Statistician  
Division of Biometrics IV  
Office of Biostatistics  
CDER, FDA

### Cristiana Gassmann-Mayer, PhD

Associate Director, Clinical Biostatistics  
Janssen Research and Development, LLC

### Zoran Antonijevic

Senior Director, Strategic Consulting and Adaptive Implementation  
Cytel, Inc.

PROGRAM COMMITTEE LIAISON:

### Barry Schwab, PhD

Vice President, Clinical Biostatistics  
Janssen Research and Development, LLC



**JOIN THE GLOBAL COMMUNITY**

*Network worldwide and develop your career with DIA membership*

Visit [www.diahome.org/benefits](http://www.diahome.org/benefits) for complete details.

 **DIA**   
www.diahome.org

## FORUM DAY 3 | WEDNESDAY, MAY 1

7:30 – 8:30 AM REGISTRATION AND CONTINENTAL BREAKFAST

8:30 – 10:00 AM SESSION 8

**Companion Diagnostics**

SESSION CHAIRPERSONS:

**Keaven Anderson, PhD**Executive Director, Statistics: Late Stage Development  
Merck Research Laboratories**Thomas E. Gwise, PhD**Deputy Division Director  
Division of Biometrics V  
Office of Biostatistics  
CDER, FDA

Personalized medicine success stories such as trastuzumab and Vemurafenib require FDA approved diagnostics to describe the patients for whom the treatments are indicated. Through the presentation of several case studies and interactive audience discussion with presenters, this session will examine the drug-diagnostic co-development pathway as it has been travelled, pointing out typical bumps in the road, such as data and analysis challenges created by misaligned development schedules, and considering more complex diagnostics such as genomic or imaging systems. We hope the session will provide some possible routes around the potholes.

SPEAKERS:

**Estelle Russek-Cohen, PhD**Division Director, Division of Biostatistics,  
CBER, FDA**Lisa McShane, PhD**Senior Statistician  
Biometric Research Branch  
Cancer Therapy Evaluation Program  
National Cancer Institute**James Symanowski, PhD**Chair, Department of Cancer Biostatistics  
Levine Cancer Institute  
Carolinas HealthCare System

10:00 – 10:30 AM MORNING BREAK

10:30 – 12:00 PM SESSION 9

**Meta Analysis for Safety Data**

SESSION CHAIRPERSONS:

**Aloka Chakavarty, PhD**Director, Division of Biometrics VII  
Office of Biostatistics  
CDER, FDA**Brenda Crowe, PhD**Research Advisor, Global Statistical Sciences  
Eli Lilly and Company

This session will explore several aspects of meta-analysis of safety data. These include innovative ways of handling the display of risks/probabilities for multiple studies so as to avoid potentially paradoxical results, answers to frequently asked question, and information from the FDA perspective on meta-analysis.

SPEAKERS:

**Christy Chuang-Stein, PhD**Vice President, Statistics  
Pfizer Inc.**Jesse A. Berlin, PhD**Vice President, Epidemiology  
Janssen Research & Development LLC**Eugenio Andraca-Carrera, PhD**Mathematical Statistician  
Office of Biostatistics  
Office of Translational Science  
CDER, FDA

12:00 – 1:00 PM NETWORKING AND LUNCHEON

1:00 – 2:30 PM SESSION 10

## Pre-Competitive Collaboration

SESSION CHAIRPERSONS:

### Frank W. Rockhold, PhD

Senior Vice President, Global Clinical Safety and Pharmacovigilance  
GlaxoSmithKline

### Mat Soukup, PhD

Team Leader, Division of Biometrics VII  
Office of Biostatistics  
Office of Translational Sciences  
CDER, FDA

There is a new dawn in pharmaceutical and biotech drug development where data and knowledge is shared openly, sometimes with specific non-profit organizations, and sometimes fully publicly. This session will address the challenges and risks in this movement.

SPEAKERS:

### Frank W. Rockhold, PhD

Senior Vice President, Global Clinical Safety and Pharmacovigilance  
GlaxoSmithKline

### Lynn Hudson, PhD

Chief Science Officer  
Critical Path Institute

### Susan K. McCune, MD

Deputy Director  
Office of Translational Sciences  
CDER, FDA

2:30 – 3:00 PM AFTERNOON BREAK

3:00 – 4:30 PM SESSION 11

## Overview and Commentary of FDA Guidance: Enriched Populations

SESSION CO-CHAIRPERSONS:

### Walter W. Offen, PhD

Global Head of Statistical Innovation  
Data and Statistical Sciences  
AbbVie

### Mohamed A. Alosch

Team Leader  
Office of Biostatistics  
CDER, FDA

This session will consist of key contributors from FDA to the recent FDA Guidances to present highlights of the guidances, along with areas for which they would particularly like feedback. The industry speaker will provide key suggestions and comments on the draft guidances. And finally, the academic speaker will serve as a discussant offering their viewpoint.

MODERATOR:

### Walter W. Offen, PhD

Global Head of Statistical Innovation  
Data and Statistical Sciences  
AbbVie

PANELISTS:

### Frank Bretz, PhD

Global Head of Statistical Methodology  
Novartis Pharma AG  
Switzerland

### Kathleen S. Fritsch, PhD

Mathematical Statistician  
Office of Translational Sciences  
CDER, FDA

### Gary G. Koch, PhD

Director, Biometric Consulting Lab. Biostatistics  
Professor, University of North Carolina at Chapel Hill

### Lisa M. LaVange, PhD

Director, Office of Biostatistics  
Office of Translational Sciences  
CDER, FDA

### Stephen J. Ruberg, PhD

Distinguished Research Fellow  
Scientific Leader, Advanced Analytics  
Global Statistical Sciences  
Eli Lilly & Company

### Robert Temple, MD

Deputy Center Director for Clinical Science  
Acting Director  
Office of Drug Evaluation I (ODE-I)  
CDER, FDA

### Sue-Jane Wang, PhD

Associate Director, Adaptive Design & Pharmacogenomics  
Office of Biostatistics, Office of Translational Sciences  
CDER, FDA

## REGISTRATION FORM

Register online or fax this page to +1.215.442.6199

*DIA is a financially independent nonprofit, global multidisciplinary association that provides a neutral forum for sharing information that optimizes the development and lifecycle management of biopharmaceuticals and related products.*

### DIA/FDA Statistics Forum 2013

Event #13008 • Statistics Forum: April 29-May 1 • Tutorials: April 28

Bethesda North Marriott Hotel & Conference Center, Bethesda, MD

#### CONTACT INFORMATION

##### Forum

Rachel Minnick, Content Lead, Phone +1.215.442.6131

Fax +1.215.442.6199, email [Rachel.Minnick@diahome.org](mailto:Rachel.Minnick@diahome.org)

##### Meeting Logistics

Contact Ellen Diegel, Event Planner, Phone +1.215.293.5810

Fax +1.215.442.6199, email [Ellen.Diegel@diahome.org](mailto:Ellen.Diegel@diahome.org)

##### Customer Service and Registration:

Contact Vicki D. Adkinson, Customer Service Associate, Phone +1 215.442.6162

Fax +1 215.442.6199, email [Vicki.Adkinson@diahome.org](mailto:Vicki.Adkinson@diahome.org)

**Registration Fees** Registration fee includes refreshment breaks, luncheons, and reception (if applicable), and will be accepted by mail, fax, or online.

**Industry Fee** US \$1400

Join DIA now to qualify for discounts on future programs!

[www.diahome.org/Membership](http://www.diahome.org/Membership)

**MEMBERSHIP**

US \$175

#### Discount Fees

Government (Full-time) US \$420

Charitable Nonprofit/Academia (Full-time) US \$700

#### TUTORIALS: APRIL 28

TUTORIAL #1 - STATISTICAL METHODS

FOR SAFETY SURVEILLANCE (9:00 AM-12:30 PM) US \$405

TUTORIAL #2 - MISSING DATA IN CLINICAL TRIALS (1:30-5:00 PM) US \$405

TUTORIAL #3 - BENEFIT-RISK EVALUATION (1:30-5:00 PM) US \$405

Payment options: Register online at [www.diahome.org](http://www.diahome.org) or check payment method.

**CREDIT CARD** number may be faxed to: +1.215.442.6199. You may prefer to pay by check or bank transfer since non-U.S. credit card payment will be subject to the currency conversion rate at the time of the charge.

Visa  MC  AMEX Exp Date \_\_\_\_\_

Card # \_\_\_\_\_

Name (printed) \_\_\_\_\_

Signature \_\_\_\_\_

**CHECK** drawn on a US bank payable to and mailed along with this form to: Drug Information Association Inc, P.O. Box 95000-1240, Philadelphia, PA 19195-1240, USA. Please include a copy of this registration form to facilitate identification of attendee.

**BANK TRANSFER** When DIA completes your registration, an email will be sent to the address on the registration form with instructions on how to complete the Bank Transfer. Payment should be made in US dollars. Your name and company, as well as the Event I.D. # must be included on the transfer document to ensure payment to your account.

**TRAVEL AND HOTEL** The most convenient airport is Ronald Reagan International Airport and attendees should make airline reservations as early as possible to ensure availability. The Bethesda North Marriott Hotel & Conference Center is holding a block of rooms at the reduced rate below until April 6, 2013, for the DIA event attendees. Room availability at this rate is guaranteed only until this date or until the block is filled.

Single \$209 / Double \$209

Please contact the Bethesda North Marriott Hotel & Conference Center by telephone at 301-822-9200 or 1-800-859-8003 and mention the DIA event. The hotel is located at 5701 Marinelli Road, Bethesda, MD 20814, USA.

#### CANCELLATION POLICY: Two weeks before the start of the event

**Administrative fee that will be withheld from refund amount:**

Member or Nonmember = \$200

Government or Academia or Nonprofit (Member or Nonmember) = \$100

Tutorial (if applicable) = \$50

Cancellations must be in writing and be received by the cancellation date above. Registrants who do not cancel by that date and do not attend will be responsible for the full registration fee paid. Registrants are responsible for cancelling their own hotel and airline reservations. You may transfer your registration to a colleague at any time but membership is not transferable. Please notify DIA of any such substitutions as soon as possible. Substitute registrants will be responsible for nonmember fee, if applicable.

**DIA reserves the right to alter the venue, if necessary. If an event is cancelled, DIA is not responsible for any airfare, hotel or other costs incurred by registrants.**

Unless otherwise disclosed, the statements made by speakers represent their own opinions and not necessarily those of the organization they represent, or that of the Drug Information Association. Speakers, agenda and CE information are subject to change without notice. Recording of any DIA educational material in any type of media is prohibited without prior written consent from DIA.

**Participants with Disabilities:** Reasonable accommodations will be made available to persons with disabilities who attend an educational activity. Contact the DIA office in writing at least 15 days prior to event to indicate your needs.

#### Please check the applicable category:

Academia  Government  Industry  CSO  Student  
(Call for registration information)

Last Name \_\_\_\_\_

First Name \_\_\_\_\_ M.I. \_\_\_\_\_

Degrees \_\_\_\_\_  Dr.  Mr.  Ms.

Job Title \_\_\_\_\_

Company \_\_\_\_\_

Address (As required for postal delivery to your location) \_\_\_\_\_ Mail Stop \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip/Postal \_\_\_\_\_ Country \_\_\_\_\_

email **Required for confirmation**

Phone Number \_\_\_\_\_ Fax Number **Required for confirmation**