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Berikon, February 2005

**Role and Applicability of Data Mining in Drug Development**

**One-day training course in Basle - Tuesday, April 26, 2005**

Organized by StatSoft and given by Dr. Diego Kuonen, Statoo Consulting

Dear Madam, dear Sir

In various presentations of FDA's "Critical Path Initiative" the use of data mining technology and methodology is mentioned as one major approach to optimize various phases of discovery, pre-clinical and clinical research. But how can data mining contribute to achieving operational excellence?

This **one-day training** will give you a very short overview of the potential and limitations of clinical data mining and highlights its applicability to accumulated large data repositories throughout the drug development life cycle – from discovery through marketing. As single data mining task the application to DNA microarray analysis for cancer classification will be illustrated.

In Dr. Diego Kuonen, CEO of Statoo Consulting ([www.statoo.ch](http://www.statoo.ch)), we are pleased to present a speaker with an outstanding knowledge of data mining, data analysis and related methodologies. He has several years of experience in consulting and teaching for various companies and universities.

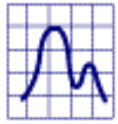
This training is a "must" for those interested in taking drug development to its next level. You can find a detailed description of the training and a registration form on the following pages or on our homepage – [www.statsoft.de/akt\\_praesentationen.html](http://www.statsoft.de/akt_praesentationen.html).

We look forward seeing you in Basle.

Please do not hesitate to contact us if you have any questions.

Yours sincerely,  
StatSoft (Europe) GmbH

Cosimo CAFORIO  
Business Development Manager



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## **Role and Applicability of Data Mining in Drug Development with an Application in DNA Microarray Analysis for Cancer Classification**

### **One-day training course**

Organized by StatSoft and given by

**Dr. Diego Kuonen**

CEO, Statoo Consulting, Lausanne

### **Description**

In various presentations of FDA's "Critical Path Initiative" the use of data mining technology and methodology is mentioned as one major approach to optimize various phases of discovery, pre-clinical and clinical research.

This one-day training will give the participants an overview of the potential and limitations of clinical data mining and its applicability to accumulated large data repositories throughout the drug development life cycle – from discovery through marketing. These clinical data repositories represent a potential gold mine of knowledge that may be further exploited by using data mining techniques for competitive business advantage.

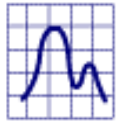
### **Training**

*1st part:* This seminar starts with a **brief discussion of the role and applicability of clinical data mining** to empower companies to extract previously unrealised information about their molecular compounds, product portfolio, clinical studies and customers from their data repositories. Next, a **general overview of data mining**, the art and science of learning from data, will be given.

*2nd part:* **As an example** application the **use of DNA microarray analysis for cancer classification** will be considered. Indeed, a reliable and precise classification of tumours is essential for successful diagnosis and treatment of cancer. cDNA microarrays and high-density oligonucleotide chips are novel biotechnologies that are being used increasingly in cancer research. By allowing the monitoring of expression levels for thousands of genes simultaneously, such techniques may lead to a greater understanding of the molecular variations among tumours and hence to a finer and more informative classification. The ability to successfully distinguish between tumour classes using gene expression data is an important aspect of this novel approach to cancer classification.

Hence, in **the main part** of this training a software-vendor independent **overview of the classification methodology** will be given. Classifiers considered include discriminant analysis, nearest neighbour and Bayes classifiers, classification trees, CHAID, neural networks, support vector machines and ensemble classifiers such as bagging, random forests and boosting. For all classifiers considered the basic methodology will be explained and their performance will be illustrated for the classification of tumours based on benchmark gene expression data.

*3rd part:* The day will end with an **illustration** of how the presented methodology and its underlying philosophy can be performed within a state-of-art data mining workbench provided by StatSoft.



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### About the speaker

Diego Kuonen, PhD in Statistics, is founder and CEO of Statoo Consulting, Lausanne, Switzerland ([www.statoo.ch](http://www.statoo.ch)). Statoo Consulting is a software-vendor independent Swiss consulting firm specializing in statistical consulting and training, data analysis, data mining, analytical CRM and bioinformatics services. Statoo Consulting's clients include companies like **Nestlé Research Center, Novartis Pharma, Novo Nordisk and Serono**. Dr. Diego Kuonen has several years of experience in teaching and training, and he is, also lecturer at the "Swiss Federal Institute of Technology Lausanne" and the "Swiss Federal Institute of Technology Zurich" as well at other Swiss universities. Currently, he is president of the organising committee of the "Swiss Statistics Meeting", vice president of the "Swiss Statistical Society" and president of its section "Statistics in Business and Industry".

### Outlook – Methodological Training in Statistical Data Mining Related to Drug Development – Two- plus one-day training course, June 20-22, 2005 in Basle

In a forthcoming three-day training course for professionals you will be provided with a thorough methodological and practical coverage of state-of-art data mining techniques that identify expected and unexpected trends in data. This course will provide hands-on experience with data mining and throughout the course illustrations of the concepts and methods will be given. Finally, on the third day participants will be able to apply what they have learned within a state-of-art data mining workbench using their own or benchmark data. If you are interested in further information about this forthcoming three-day data mining course, please send us an email with your contact details – [info@statsoft.ch](mailto:info@statsoft.ch) – or please find a detailed description of the training and a registration form on our homepage – [www.statsoft.de/akt\\_praesentationen.html](http://www.statsoft.de/akt_praesentationen.html).

### Prerequisites

A basic working knowledge of statistics.

### Presentation

The lecture will be given in English.

### Date and hour

Tuesday, April 26, 2005 starting 08.30 AM till 5.00 PM

### Place

UBS AG, Training- and Conference Center, Viaduktstrasse 33, CH-4052 Basle, Switzerland - see [www.ubs.com/1/e/abz\\_basel.html](http://www.ubs.com/1/e/abz_basel.html).

### Course fee

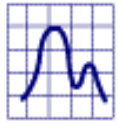
Commercial **SFR 950.00** (approx. € 630.00), academic **SFR 650.00** (approx. € 430.00) Price includes documentation, coffee breaks and lunch but not V.A.T. Group discounts are available. All participants will receive an attendance certificate.

### Registration

See separate registration form or [www.statsoft.de/akt\\_training.html](http://www.statsoft.de/akt_training.html).

### Contact Information

For further information please contact Cosimo Caforio, Business Development Manager, Phone +41 56 631 31 10 and Fax +41 56 631 31 12 or Email [cosimo.caforio@statsoft.ch](mailto:cosimo.caforio@statsoft.ch).



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**Registration form for one-day training course**  
*Role and Applicability of Data Mining in Drug Development*  
Organized by StatSoft and given by Dr. Diego Kuonen, Statoo Consulting

To register please fill out this form completely and fax it to **+41 56 631 31 12** or register online at [www.statsoft.de/akt\\_training.html](http://www.statsoft.de/akt_training.html).

\* Required Information

First Name*	
Last Name*	
Company*	
Department*	
Address*	
ZIP/Postal Code*	
City*	
Country*	
Phone*	
Fax	
Email*	
Date and Signature*	
Comments	

- SFR 950.00 Commercial**
- SFR 650.00 Academic** - Please attach a copy of your certification.

**Terms and Conditions**

Payment of the course registration fee is required prior to the start of the course. Cancellations received in writing more than 30 days before the start of the course will be refunded 100% of the course fee. Cancellations received between 30 and 14 days prior to the course will be refunded 50% of the course fee. We regret that no refunds are allowed for cancellations received within 14 days of the course start date.

**Contact Information**

For further information please contact Cosimo Caforio, Business Development Manager, Phone +41 56 631 31 10 and Fax +41 56 631 31 12 or Email [cosimo.caforio@statsoft.ch](mailto:cosimo.caforio@statsoft.ch).