Precision medicine in GI oncology: present and future

Overview
Over the last 10 years numbers of therapeutically targetable alterations in tumors have been revealed. This has led to a substantial evolution of the therapeutic approach for cancer patients that are now routinely molecularly genotyped in an attempt to pair the identified mutation with the appropriate targeted therapy. With the increasing availability of omics-based technologies, the spectrum of current biomarkers is being rapidly expanded and considerable emphasis goes to the role of biomarkers in therapeutic response prediction and monitoring. Aim of this workshop is to review the current trend of biomarker discovery and application, emphasizing their diverse roles in medical practice and drug development.

Learning objectives
By attending this live educational workshop, participants will be able to:
• Provide updates on biomarkers for GI cancer patient selection
• Define how to interpret OMICS-data for application in clinical medicine
• Analyze the importance of integrating biomarkers in clinical trials to fasten drug development
• Describe novel technologies that simultaneously identifies and quantifies biomarkers

Target audience
Medical oncologists and translational researchers who have an interest in the biology of GI cancer who want to increase their knowledge on new technologies enabling the individualization of GI cancer treatment.

Chair
Tianshu Liu
Shanghai Zhongshan Hospital
Fudan University Cancer Center
Shanghai, China
**CME Provider**

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General information

This live educational workshop takes place at the:

**Shanghai Zhongshan Hospital**
Fudan University
Shanghai, China

**Language**
The official language of this live educational workshop is Chinese. The two lectures in English will be translated consecutively in Chinese.

**CME Provider**
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Programme
26 August 2016

日程
2016年8月26日
Friday, 26 August 2016

8.15 Welcome and opening
Shanghai Zhongshan Hospital Dean

Module I  Towards biomarkers clinical utility

Keynote speeches

8.30 KNS1: The evolving landscape of personalized therapy in GI oncology: progress and prospects *
Sabine Tejpar (Belgium)

9.30 KNS2: Biomarker-driven study design: new challenge to physicians
Tianshu Liu (China)

10.00 KNS3: Subgroup Cluster-Based Bayesian Adaptive Methods for Precision Medicine
Yuan Ji (USA)

10.30 Tea break

Working groups

10.45 Case studies
Working group discussion (participants will be divided in 6 groups)

Chairs: Gong Chen (China), Sabine Tejpar (Belgium)

Coordinators: Zhiyu Chen, Qiu Li, Hong Qiu, Jun Zhang, Song Zheng, Ji Zhu (China)

Topic 1: Contemporary biomarker-driven clinical trial for colorectal cancer (Umbrella trial)

Topic 2: Basket trials for anti-PD-1/PD-L1 therapies across tumor types

11.45 Group sharing

13.00 Lunch

Module II  Omics and cancer biomarkers

Keynote speeches

13.50 Introduction
Tianshu Liu (China)

Case discussions

14.00 KNS4: Big data challenges in biomarker research
Jia-Rui Wu (China)

14.30 KNS5: How to translate next generation sequencing into daily clinical practice *
Andreas Jung (Germany)

15.30 KNS6: Clinical application of liquid biopsy
Lin Shen (China)

16.00 Tea break

16.15 Case discussion I
Sabine Tejpar [Belgium]
Panel discussion

17.00 Case discussion II
Yanhong Deng (China)
Panel discussion

17.45 Closing remarks

18.00 End of the workshop

* This lecture will last longer to allow time for consecutive translation from English to Chinese

Legend: 🗣 Keynote speech  ⬅️ Working groups 📃 Case study 🌟 Group sharing 🎤 Case discussion
週五，2016年8月26日

8.15  开幕欢迎辞
       上海中山医院院长

主题1：分子标志物的临床应用

主题演讲
8.30 KNS1: 个性化治疗在胃肠道肿瘤领域的发展历程：进展和未来 *
       Sabine Tejpar (比利时)
9.30 KNS2: 精准治疗时代靶标临床研究的新挑战
       刘天舒 (中国)
10.00 KNS3: 适应性研究方法在靶标设计中的应用：SCUBA算法
       程元 (美国)

10.30  茶歇

工作组
10.45  案例分析
       小组讨论 (参与者分为6个小组)
       主席：
       陈功 (中国), Sabine Tejpar (比利时)
       小组长：
       张俊, 朱骏, 李秋, 郑松, 邱红, 陈治宇 (中国)

议题1: 当前分子标志物驱动的结直肠癌临床试验 (伞研究)
议题2: 抗-PD-1/PD-L1 治疗不同类型肿瘤的临床试验 (篮子研究)

11.45  小组分享

13.00  午饭

议题2：组学和肿瘤标志物

13.50  开场介绍
       刘天舒 (中国)

14.00 KNS4: 大数据与分子标志物的发现
       吴家睿 (中国)
14.30 KNS5: 如何将二代测序转化应用于临床实践 *
       Andreas Jung (德国)
15.30 KNS6: 液态活检的临床应用
       沈琳 (中国)

16.00  茶歇

病例讨论
16.15  病例讨论1
       Sabine Tejpar (比利时)
       专题讨论
17.00  病例讨论2
       邓艳红 (中国)
       专题讨论
17.45  总结致辞
18.00  会议结束

* 因为演讲期间有同声传译，讲座时间可能较预期延长。
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**Andreas Jung**
Declared receipt of honoraria or consultation fee from Amgen Deutschland GmbH, AstraZeneca Deutschland, Merck KGaA, Qiagen N.V., Roche Pharma. Declared he is a member of a company advisory board for Amgen Deutschland GmbH, AstraZeneca Deutschland, Merck KGaA.

**Lin Shen**
Declared receipt of grants/contracts from Taiho, AstraZeneca, Hengrui Co. Ltd. Declared receipt of honoraria or consultation fee from Taiho, Hengrui Medicine Co. Ltd. Declared she is a member of a company advisory board for Merck, Taiho, Hengrui Medicine Co. Ltd.

**Sabine Tejpar**
Declared receipt of grants/contracts from Sanofi, Bayer (Biomarker discovery contract). Declared receipt of honoraria or consultation fee from Sanofi, Merck Serono, Roche, Amgen. Declared participation in a company sponsored speaker’s bureau for Sanofi, Merck Serono, Roche, Amgen.

**Jia-Rui Wu**
Declared no potential conflict of interest.

The following faculty have provided no information regarding significant relationship with commercial supporters and/or discussion of investigational or non-EMEA/FDA approved (off-label) uses of drugs as of 18 August 2016.

**Yanhong Deng**
**Yuan Ji**
**Tianshu Liu**
Biographies
Biographies
Faculty

Gong Chen
Sun Yat-sen University Cancer Center, State Key Laboratory of Oncology in South China
Collaborative Innovation Center of Cancer Medicine
Department of Colorectal Surgery, Sun Yat-sen University Cancer Center
Guangzhou, Guangdong, China

Chen Gong, currently PhD of Clinical Oncology, Associate Chief Physician, Consultant surgeon within the Department of colorectal surgery and Supervisor of postgraduate, was also a Member of the Colorectal Track Committee of Scientific Programme of the ASCO annual meeting in 2015. He also covers the role of Director of the CSCO (Chinese Society of Clinical Oncology) Young Committee, together with being a member of the Beijing CSCO Funding of Clinical Study. In addition he is also a member of the Expert Committee of GIST, GI NETs and a Member of the Standing Committee of Colorectal Surgeon Branch of the Chinese Association of Doctors and of the Guangdong Anticancer Association. He is also a member of ESMO and ASCO in addition to being the editor of the Chinese version of colorectal cancer, of the “Annals of Oncology” and the editor of the Chinese version of “The Oncologist”. He has also been co-investigator for some international multicenter RCTs, including MASCOT, AVANT, LanGIST, GRID, and many others. In addition, he has also covered the role of main translator for the Chinese version of the NCCN guidelines of colorectal cancer since 2007.

Yanhong Deng
Department of Medical Oncology
Gastrointestinal Hospital
Sun Yat-sen University
Guangzhou, Guangdong, China

Yanhong Deng is currently Director of Department of Medical Oncology of The Sixth Hospital affiliated to Zhongshan University School in China. She has mainly focused her work on colorectal cancer and cancer stem cells and has been a member of Colorectal Diagnosis and Treatment Standard Team since 2015. In addition, she has also been member of Consensus of maintenance treatment of advanced colorectal cancer in China, vice-Chairman of the Professional Committee of colorectal cancer, member of Oncology clinical research committee of the Chinese Anti-cancer Association (CACA) and member of the MDT Professional Committee, Chinese Medical Association.
Yuan Ji has been Director or Research Institutes of NorthShore University HealthSystem in Evanston since 2012, together with covering the role of Professor, Department of Public Health Sciences at University of Chicago since 2013. From 2003 to 2006 he was Assistant Professor at the Department of Biostatistics and Applied Mathematics of University of Texas M. D. Anderson Cancer Center in Houston. Starting from 2006 until 2009 he covered the role of Assistant Professor within the Department of Bioinformatics and Computational Biology of the Division of Quantitative Sciences at University of Texas M.D. Anderson Cancer Center in Houston. Consequently in 2009 he became Associate Professor (with tenure) in the Department of Biostatistics at University of Texas M. D. Anderson Cancer Center in Houston, until 2012. In the same year, 2009, he also started covering the role of Associate Professor [Adjunct] within the Department of Statistics at Rice University in Houston. Within his medical career, he has been invited as a Speaker to various international conferences and departmental seminars for talks and has been rewarded with several prices, such as “National Mathematical Modeling Contest” at the Department of Mathematics of Fudan University, in China in 1995, “Merck Foundation Fellowship” Department of Biostatistics and Medical Informatics, University of Wisconsin, Madison in 2002, “ENAR Student Award” for the paper “A Bayesian classification method for treatments using microarray gene expression data” by International Biometric Society’s Eastern North American Region (ENAR) in 2003 and many others.

Andreas Jung is currently holding the position of Professor for Molecular Pathology, Head of Unit Tumormorphogenesis & Molecular Pathology at Institute of Pathology, University of Munich. After achieving his diploma in Biology at the Institute of Immunology and Virology of the University of Würzburg, he became PhD in Biology at the same institute. Since 2005, he has overed the role of Senior Scientist, Group Leader and Principal Investigator of the Unit Tumormorphogenesis & Molecular Pathology (diagnostic unit) at the Institute of Pathology, University of Munich. Among his scientific interests we find: molecular mechanisms of the pathogenesis of colorectal cancer, Wnt-signaling, molecular mechanisms of chemoresistance and metastasis, molecular pathology and biomarkers. In 2000 he won the “Young Investigator Award of the American Association for Cancer Research (AACR)” award.
Lin Shen graduated from Xuzhou Medical College in 1984, and from Beijing Medical University in 1995. In 2000, she trained in the United States at the National Institutes of Health at the National Institute of Diabetes & Digestive & Kidney Diseases (NIH/NIDDK), focusing on integrated and individual therapies for gastrointestinal tumors. Dr. Shen currently holds positions in a number of organizations, including Vice President of Clinical Oncology at Beijing Cancer Hospital and Peking University and Deputy Director at Beijing Institute for Cancer Research. She specializes in gastrointestinal oncology, dealing mainly with gastric cancer, esophageal cancer, colorectal cancer, pancreatic cancer and gastrointestinal neuroendocrine oncology. Dr. Shen has presided over and participated in many national and international drug studies. She also serves as editor, associate editor, and reviewer for numerous medical journals.

Tianshu Liu is currently Professor and Director of the Department of Medical Oncology, Shanghai Zhong Shan Hospital. She graduated in 1993 in Medicine, at the Former Shanghai Medical University and specialized in Gastroenterology, Clinical Epidemiology (MSc.) at the School of Fudan University (Former Shanghai Medical University). She obtained her PhD in internal medicine in 2007 from the Medical School of Fudan University. In 2001 she obtained a fellowship and was trained at in the GI Department, Julet Bordet Institute, Belgium, chemotherapy of GI cancer, financially supported by WHO (World Health Organization). She continued her training at the Zhong Shan Hospital Fudan University where she is now Professor, and Director of the Department of Medical Oncology.

Lin Shen
Department of Gastrointestinal Oncology
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Tianshu Liu
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Sabine Tejpar
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After a training in Internal medicine and Gastro Enterology and a Ph.D in the programme of Molecular Oncology at the Center for Human Genetics, KU Leuven, Sabine Tejpar became in 09-2003 an Associate Professor in the Department of Gastro-Enterology, Digestive Oncology Unit, UZ Leuven in Belgium. She works as a part time clinician, part time researcher (Senior Clinical Investigator of the Fund for Scientific Research-Flanders in Belgium, with a focus on basic and translational research in colorectal cancer. Her translational research projects involve molecular sub-classification of colorectal cancer, prognostic and predictive marker discovery, biomarker test qualification and innovative trial designs. She works closely with the Swiss Institute of Bioinformatics and a pod of 4 dedicated bio statisticians for over 7 years. Currently active reanalysis of trials for subgroup identification and setup of platforms for prospective stratification, include generation of relevant biomarker classifiers and setup of infrastructure. Her basic research projects are functional studies of some candidate crc biomarkers, functional screens and the study of ZIC2 transcription factor in wnt and nodal signalling.

Jia-Rui Wu
Institute of Biochemistry and Cell Biology
Shanghai Institutes for Biological Sciences
Chinese Academy of Sciences
Shanghai, China

Jia-Rui Wu is currently Vice President of the Shanghai Advanced Research Institute, Chinese Academy of Sciences in Shanghai, Deputy Dean of School of Life Science and Technology, in ShanghaiTech University and also Director of Key Laboratory of Systems Biology, Chinese Academy of Sciences in Shanghai, China. He has also been Vice-President of Chinese Association of Geriatric Research, Editor-in-Chief of the “Journal of Molecular Cell Biology”, Associate Editor of the “BMC Systems Biology” and Associate Editor of the “Frontiers in Systems Physiology”. Dr. Wu’s laboratory is working on molecular mechanisms of type 2 diabetes and cancer based on systems biology approaches. Dr. Wu has published more than 90 research papers in international scientific journals.
Biographies

Coordinators

Zhiyu Chen
Fudan University Cancer Center
Shanghai, China

Zhiyu Chen is currently associate chief physician of the Fudan University Cancer Center. He is also member of the Precision Medicine and Cancer MDT branch of the Chinese Research Hospital Institute (CRHA), of the Colorectal cancer branch of the Shanghai anti-Cancer Association, member of the pancreatic Neuroendocrine tumor branch of the Chinese Anti-Cancer Association. In addition he is also member of ASCO and CSCO, whilst focusing mainly on medical oncology of gastrointestinal cancer.

Qiu Li
Fudan University Cancer Center
Shanghai, China

Since 2006, Qiu Li has been working for the Present State Key Laboratory of Biotherapy and Cancer Center, West China Hospital, Sichuan University, China and since 2012 she has been a Professor. Previously, from 1999 to 2004 she has studied to become Doctor of Oncology at the West China Medical School, Sichuan University (Formerly West China University of Medical Sciences) in China. In 1995 she got Bachelor Degree in Medicine, Chongqing University of Medical Sciences in China. In charge of National 973 project [No. 2004CB518706], National 863 project [No. 2009ZX09503-005], project of National Natural Sciences Foundation [No. 30470672, No. 81071862, No. 81572988] and project of Wujieping foundation [No. 320.6750.1268] and many others. Interested in comparative effectiveness research on anti-cancer tests and treatments, basic and clinical study in molecular targeted therapy of cancer.
Hong Qiu is currently holding the position of associate professor of the department of Oncology of the Tongji Hospital, Tongji Medical College at the Huazhong University of Science and Technology. She is also Standing Committee Member and Secretary of cancer rehabilitation and palliative care committee of the Hubei Anti-Cancer Association. In addition she is also Vice chairman of the lymphoma committee of the Hubei Anti-Cancer Association, member of the translational medicine committee of the Hubei Anti-Cancer Association, member of the gastric cancer committee of the Hubei Anti-Cancer Association, member of the radiotherapy committee of the Wuhan Medical Association. Moreover, she is member of the chemotherapy committee of the tumor nutrition society of the Chinese Anti-Cancer Association (CACAI), Standing Committee Member of the precision medicine and tumor MDT committee of the Chinese Research Hospital Associate, Standing Committee Member at the Corporate Executive Board of the Radiation Oncology Committee of the World Association of Chinese Oncologist (WACO). She is also member of the Colorectal cancer specialty committee of the CSWOG and member of the Translation Group of CSCO.

Jun Zhang got his Ph.D and M.D. degree from Shanghai Jiaotong University, and been trained in MD Anderson Cancer center as visiting assistant professor during the period from 2003 to 2006. His research interest is the translation research of chemotherapy and targeted therapy for gastric cancer and colorectal cancer, mainly the biomarkers research and metronomic chemotherapy. He finished two National Science Foundation, and his research work has been published in international peer-reviewed journals including Molecular Cancer, International Journal of Cancer, Cancer letter, etc.
After achieving a Master of epidemiology and health statistics, Ji Zhu is now Associate chief physician of the Department of Radiation Oncology at the Fudan University Shanghai Cancer Center in China, also visiting scholars of MD Anderson Cancer Center. He is also Director of the Department of Clinical Statistical Center and member of ethics committees of the Fudan University Shanghai Cancer Center. In addition, he is member of the young experts committee of CSCO, youth member of the Colorectal cancer specialty committee of the Chinese AntiCancer Association (CACA), secretary and member of the radiotherapy committee of the Chinese AntiCancer Association (CACA), member of the evidence-based medicine committee of the Clinical epidemiology branch of the Chinese medical association, member of the GI cancer committee of the Shanghai medical association and member of the GI cancer committee of the tumor standardized training working committee of the Chinese Medical Doctor Association.

Song Zheng has been rewarded as no. 1 People’s Hospital of Hangzhou/The Affiliated Hangzhou Hospital of Nanjing Medical University, a visiting Scholar of Royal Devon & Exeter NHS, UK, as the Top Ten Outstanding Youth of Hangzhou City, as the new Century “151” Talent of Zhejiang Province, as Candidate of “131” Outstanding Young Talent of Hangzhou City and as Candidate of 1st Medical young Talent of Zhejiang Province and finally as Winner of Youth Science & Technology Award in 2013. He is also Member of the Cancer Target Therapy Branch of CSBME, of the Cancer Rehabilitation Branch of CAGG, of the CTM of Cancer Nutrition and Supportive Care Branch of CACA, youth Member of the Clinical Epidemiology Branch of Chinese Medical Association. In addition, he is youth Member and Secretary of the Medical Oncology Branch of Zhejiang Cancer Association, Vice Chairman of the Cancer Target and Cellular Therapy Committee, together with being Member of the Biological Treatment Committee, youth Member of the Colorectal Cancer Committee, youth Member of the Cancer ChemoTherapy Committee of Anti-Cancer Association, Zhejiang Province. He also hosted more than 10 Projects including NSFC and 3 National Invention Patent, together with publishing more than 20 SCI papers, as an expert reviewer of NSFC. He finally hosted more than 10 Scientific & Technological Progress Awards in the City and the province.
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