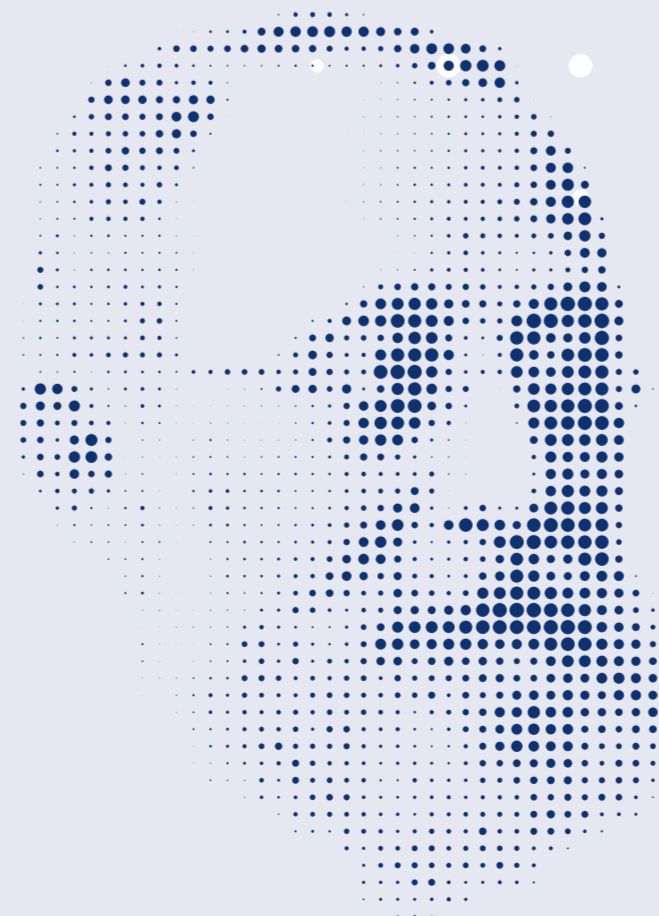


VIRCHOW LABORATORIES - IN-  
STITUTE OF PATHOLOGY  
SHANGHAI EAST HOSPITAL -  
TONGJI UNIVERSITY



Virchow  
Laboratories  
魏爾嘯實驗室

## Important Pathologists

settling the Basis of Today's Anatomic and Molecular Pathology  
and the Scientific and Medical Sino-German Relationship.

重要病理学家奠定了今天解剖和分子病理学的基础  
及中德科学和医学关系



Yuan-fang Chao

(605-615) was living during the Daye reign of the Sui Dynasty. His book called "Zhu Bing Yuan Hou Lun" (General Treatise of Causes and Manifestations of Diseases) was the first book in China dedicated to the study of pathogenesis. It covered the diseases of many organs, wound and other infections, parasitic and endocrine diseases.

巢元方是隋大业年间的太医博士，他知识渊博，医术高超《诸病源候论》此书为中国第一部中医病因证候学专著。对一些传染病、寄生虫病、外科手术等方面，有不少精辟论述，对后世医学影响较大



Prof. Rudolf Virchow

(1821-1902) was the founder of modern science based anatomic pathology. He worked at the Humboldt-University Berlin. His most relevant publications are the famous "Cellularpathologie" and "Die krankhaften Geschwülste" (On Malignant Tumors). In addition he was very much engaged in social problems of that time.

菲尔绍以多项科学发现而闻名。他是第一个发现白血病的人。菲尔绍成立了“人类学、人种学及史前史学会



Dr. Baozhang Hou

In 1918, Dr. Baozhang Hou (1893-1967) was admitted into Cheeloo University Medical College, the first university in China established in early 1900, where he became the head and professor of the Dept. of Pathology. Among others he studied at the University of Berlin and received extensive training in pathology under the leadership of Prof. Ludwig Pick. 侯宝璋 齐鲁大学医学院，中国1900年第一所大学。1926年，侯宝璋先后到美国芝加哥大学和德国柏林大学深造。在柏林大学，他在Ludwig Pick的领导下，接受了极为严格的病理学训练。



Prof. Karl Lennert

Prof. Karl Lennert (1921-2012) pioneered the present view of malignant lymphomas. He was the father of the Kiel Classification that was pivotal for the present WHO classification of the tumours of the lymphoid and haematopoietic tissues. He has had a strong relationship with Chinese pathologist documented by the Dr. hon. Causa of the North-Western University, China.

卡尔·伦纳特教授，率先给出恶性淋巴瘤的看法。他是基尔分类的先父，基尔分类对目前世界卫生组织的淋巴和haema-topoietic组织的肿瘤至关重要。他与中国病理学家有着深厚的友情，西北大学 Hon. Causa 教授 记载道。

01

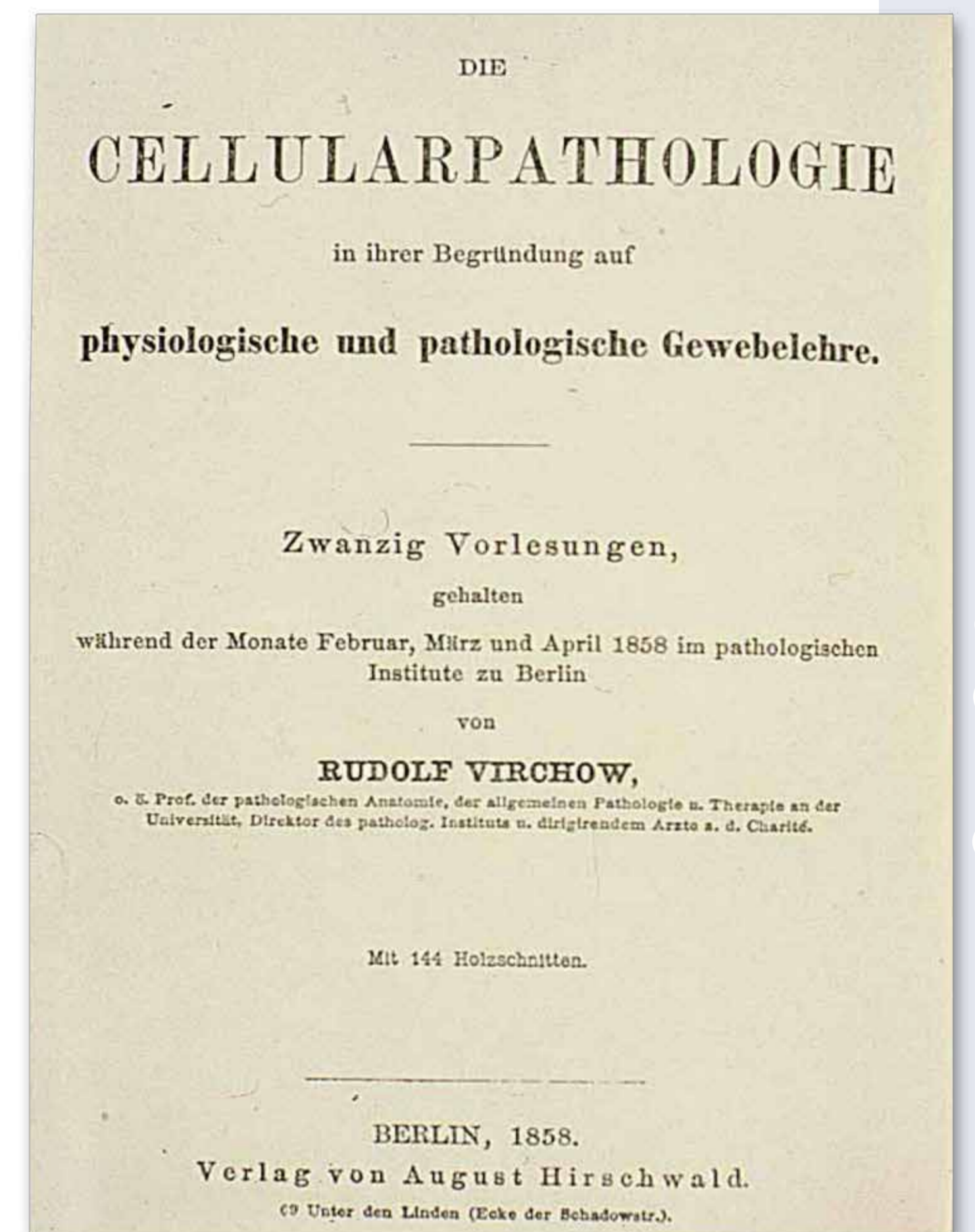




Chunfan Jiang & Jiang Gu.  
History and current state of pathology  
in China. *Virchows Arch* (2013) 463:599-608



From "Cun Zhen Tu,"  
(Jie Yang, Northern Song Dynasty  
(960-1127 AD\*) via "Disedibus et causus  
morborum" (B. Morgagni 1662-771)  
to "Cellularpathologie" (R. Virchow  
1812-1902) 从“村甄图”北宋到  
“Disedibus et causus morborum”  
再到分子病理学



# Long-lasting relationship between Chinese and German Medicine in Shanghai. 中德医疗长久关系在上海



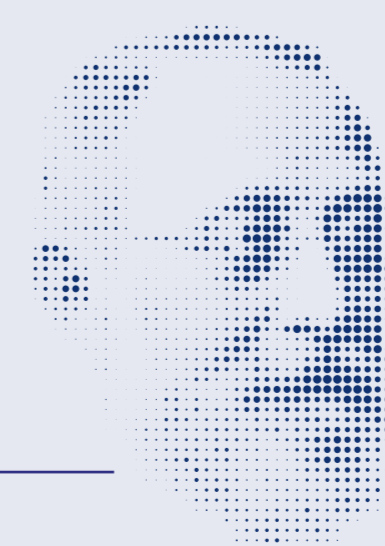
Entrance of Tongji University  
and Deutsche Medizinschule  
für Chinesen (German Medical School for  
Chinese (Shanghai, 1907)  
进入同济大学，  
为中国人开设的德国医疗学校



Dr. Erich Paulun -  
Founder of the German Medical School  
for Chinese, Shanghai, 1907



03



The Overall Concept  
of Today's Sino-German Co-Operation.  
当今中德 合作整体轮廓

**“The crucial and indispensable prerequisite of an adequate treatment stands on the ground of a reliable and reproducible diagnosis. This is true for infectiology and in particular oncology, which almost always relies on tissue based diagnostics, i.e. anatomic and molecular pathology.**

合适治疗的关键和必要前提是站在一个可靠和可重复性诊断的基础上。这对感染学，尤其是肿瘤，几乎总是依赖于基于组织的诊断，即解剖和分子病理学。

**This awareness was the major reason to initiate the co-operation between Virchow Laboratories - Institute of Pathology, supported by the Institute of Pathology, Charité-University Hospital Berlin, and Shanghai East Hospital - Tongji University,”.**

这种意识是倡导魏尔啸分子病理实验室由柏林夏洛特大学医院病理学研究所资助 和上海同济大学东方医院间合作的主要原因。

Manfred Dietel

Liu Zhongmin

04



# 2011 Signing Ceremony on the Establishment of an Virchow Laboratories - Institute of Pathology\* at Shanghai East Hospital, Tongji University 2011.

年签字仪式 在上海东方医院同济大学建立魏尔啸分子病理实验室



\* Supported by Institute of Pathology,  
Charite-University Hospital Berlin

05

VIRCHOW LABORATORIES - INSTITUTE OF PATHOLOGY  
SHANGHAI EAST HOSPITAL - TONGJI UNIVERSITY



Virchow  
Laboratories  
魏爾嘯實驗室

## Today's Challenges in Anatomic and Molecular Pathology 今天在解剖和分子病理学的挑战

**The most important goal of diagnostic pathology today is to extract from the patient's tissue as many information as possible to predict pretherapeutically the response of infections or individual tumors to certain (targeted) drug(s).**

当今病理诊断最重要的目标是从患者的组织中提取尽可能多的信息，以预测预治疗感染或个体肿瘤对某些（定位）药物的反应。

**This goal will be achieved by applying in parallel classical, immunological and molecular techniques completed by virtual microscopy.**

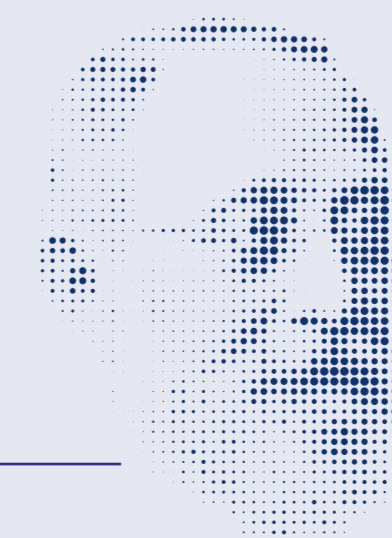
**These information enable clinical doctors to discuss the case in an interdisciplinary tumor board and to assign the optimal treatment to the benefit of each individual patient.**

通过虚拟显微镜平行运用古典，免疫逻辑和分子技术来实现这一目标。这些信息使临床医生商量的情况下在多学科肿瘤委员会上讨论 并给每个病人最佳的治疗。

**This is the prerequisite for precision medicine.**

这是个性化医疗的前提

06



# Multidisciplinary Cooperation Enables Personalised Oncology

## 多学科合作实现个性化肿瘤



07





# External Quality Control for all Methodologies is of Utmost Importance

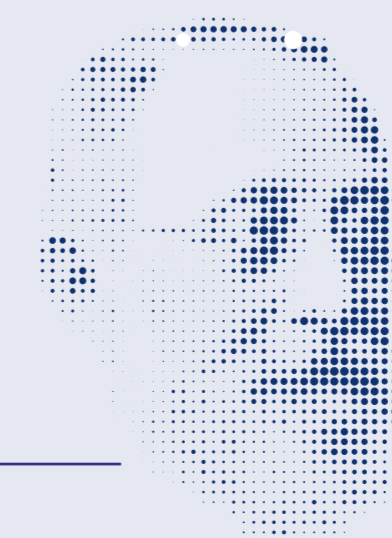
外部质量控制对所有方法论都是至关重要。

Quality Initiative Pathology,  
the certification system of in Germany  
agreed to mutually accept the certifications  
since organization, structure and evaluation  
of both Round Robin tests are very similar  
and almost exchangeable.

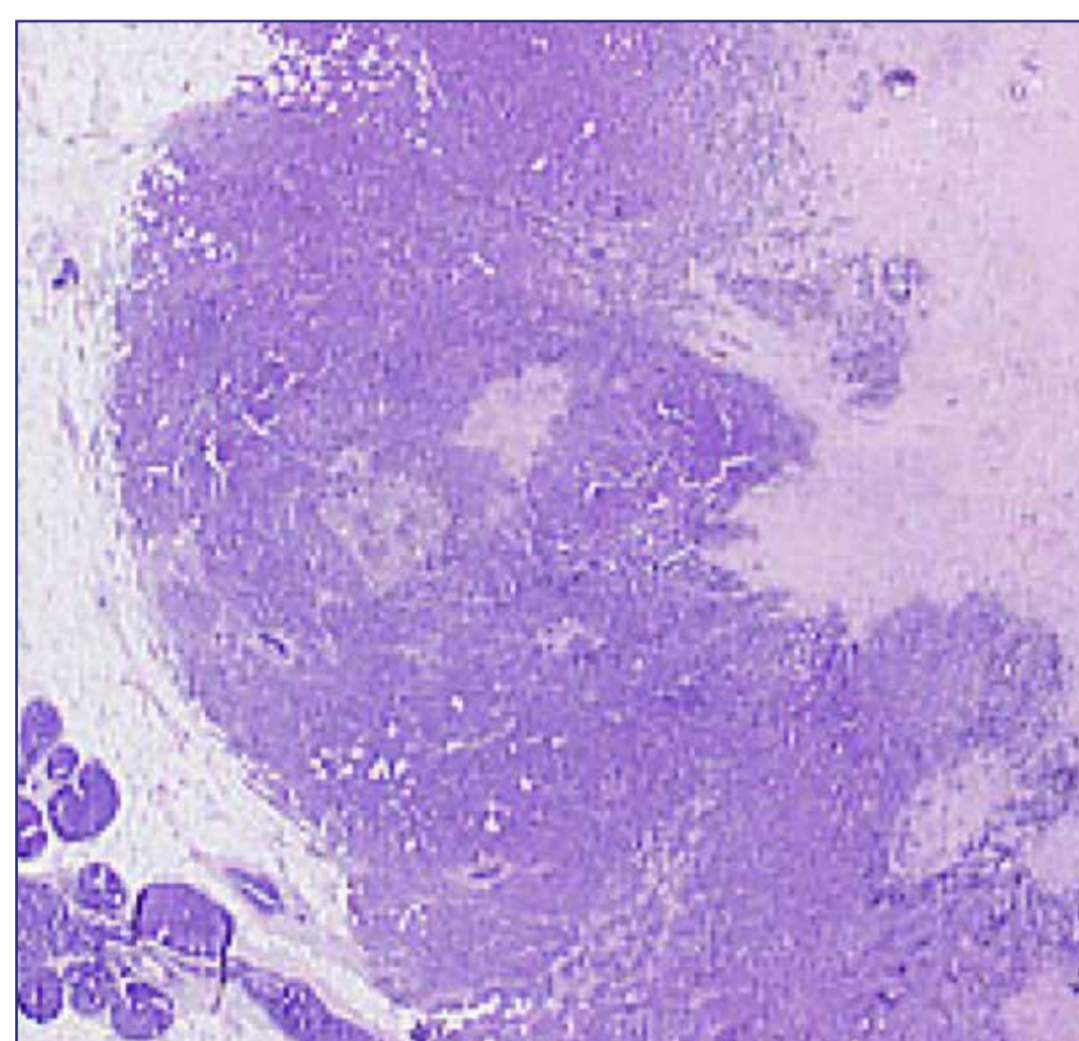
同意双方接受证书, 因为组织, 结构和循环赛试  
验是很类似而且几乎可以交换



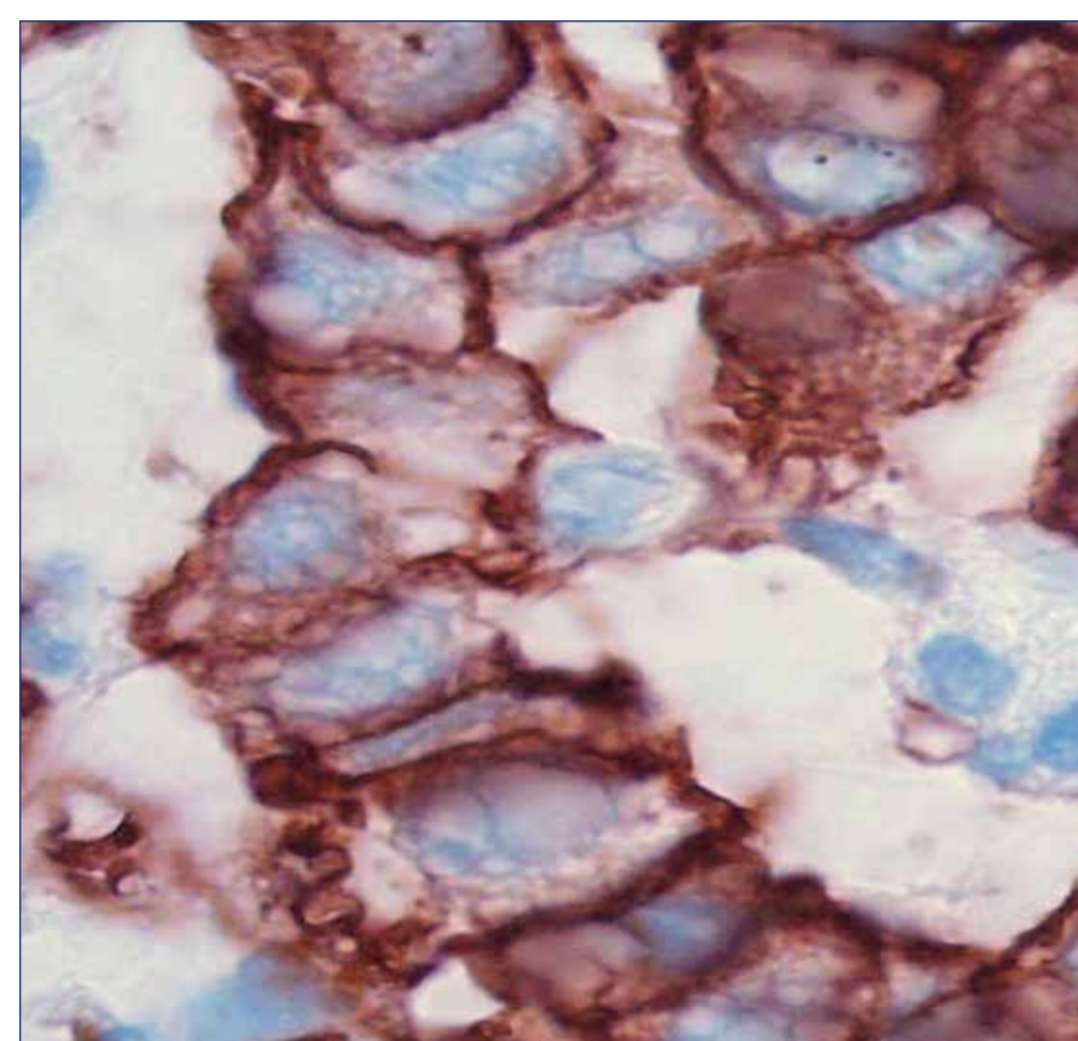
08



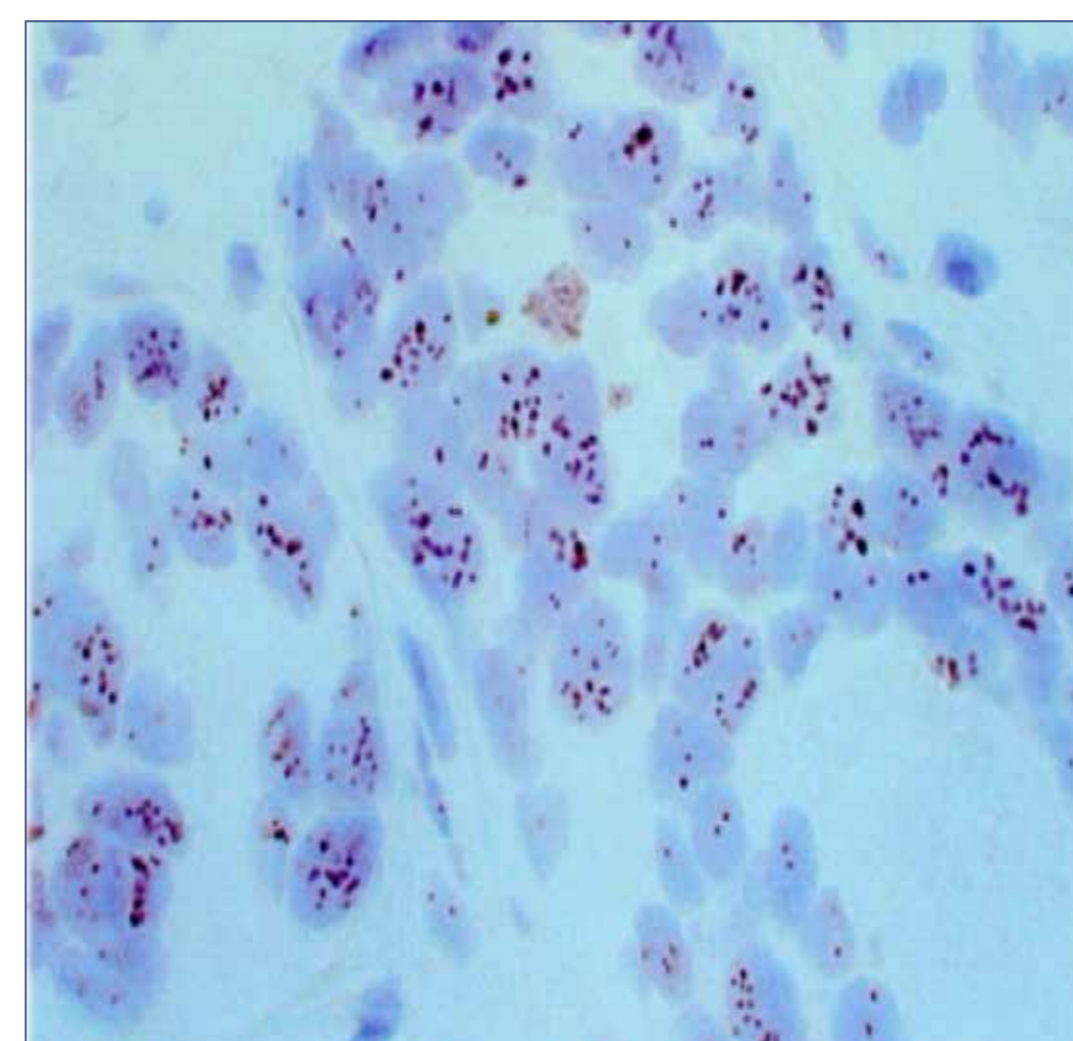
# Comprehensive Tissue-based Diagnostics Depends on Combination of up to date Technologies



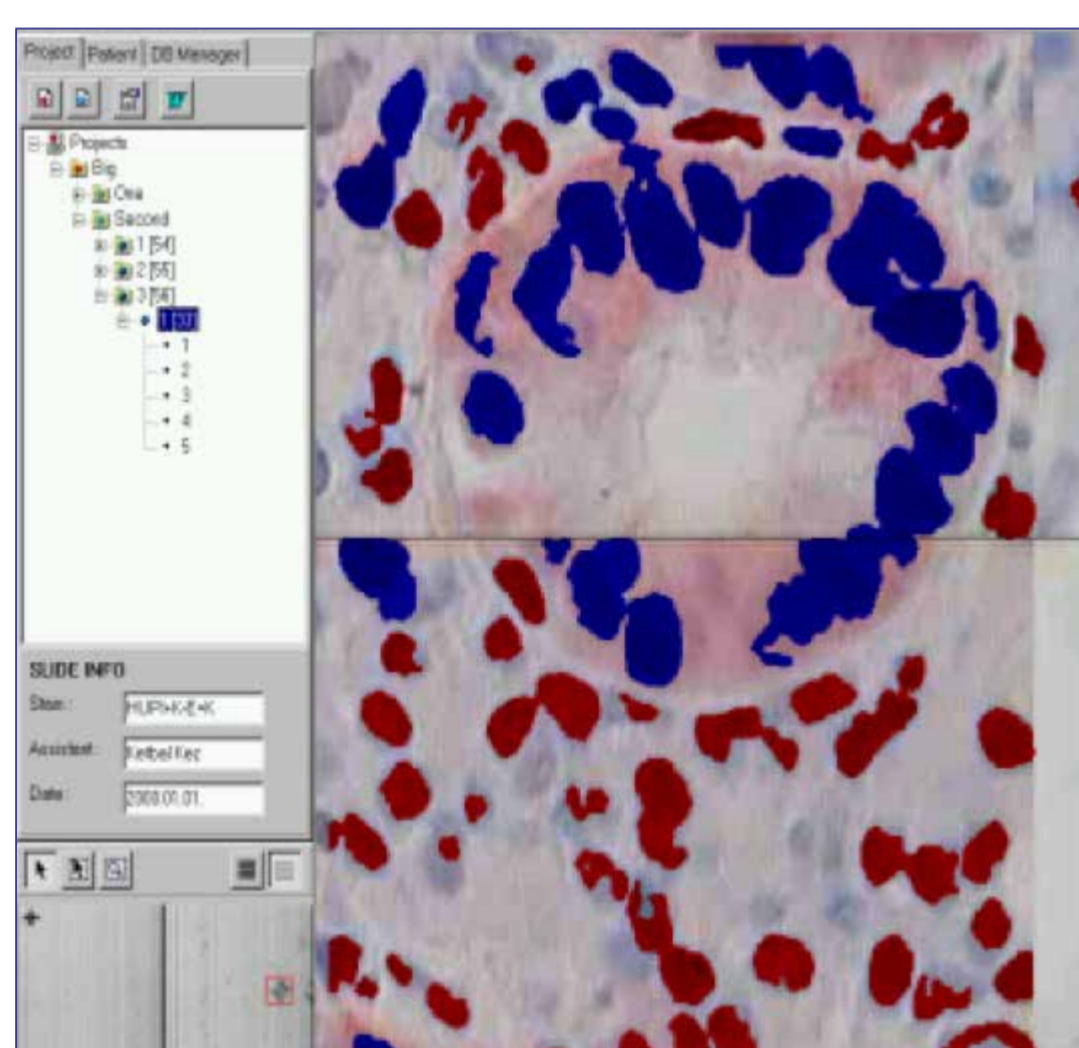
Classical H&E as basic diagnostic tool.



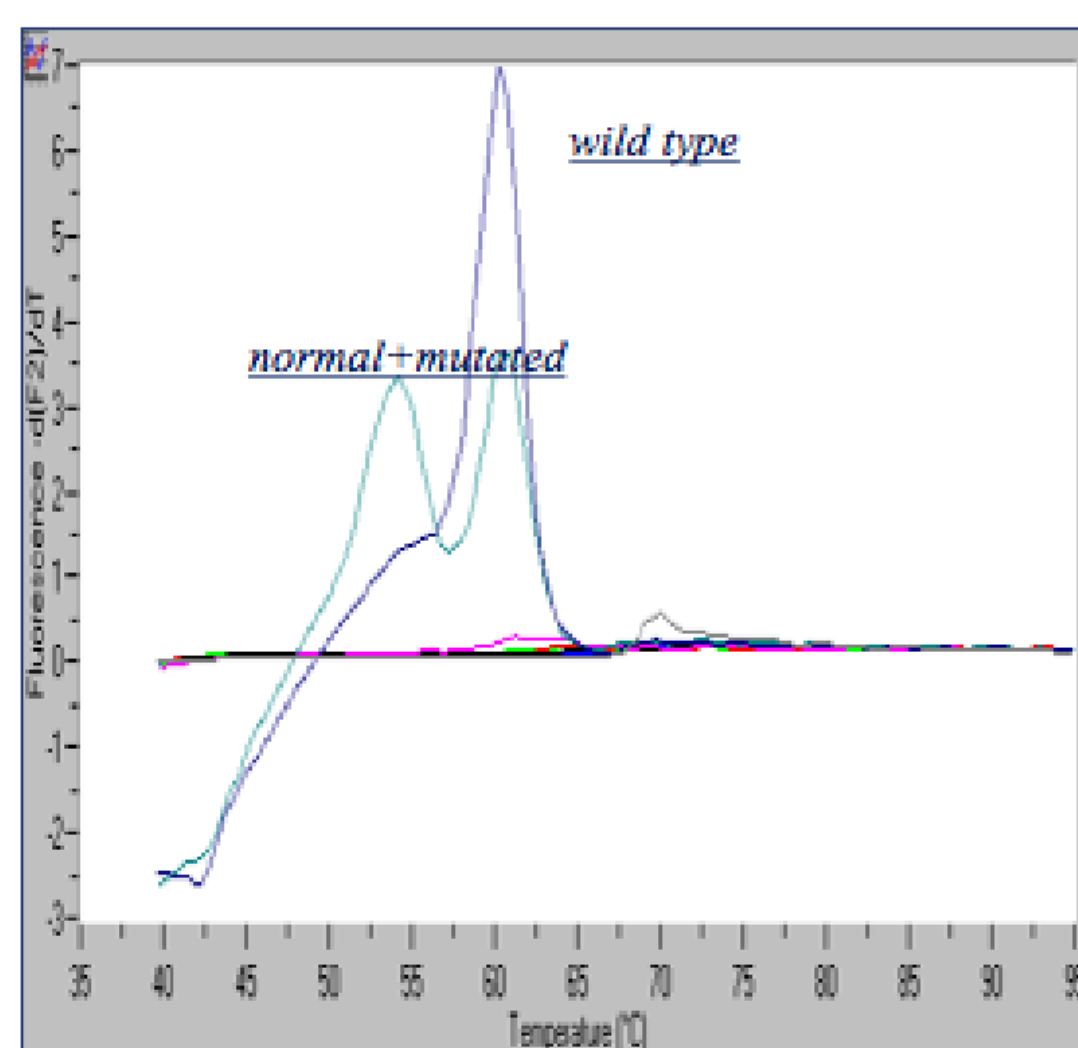
Immunohistochemistry high lightening characteristic proteins.



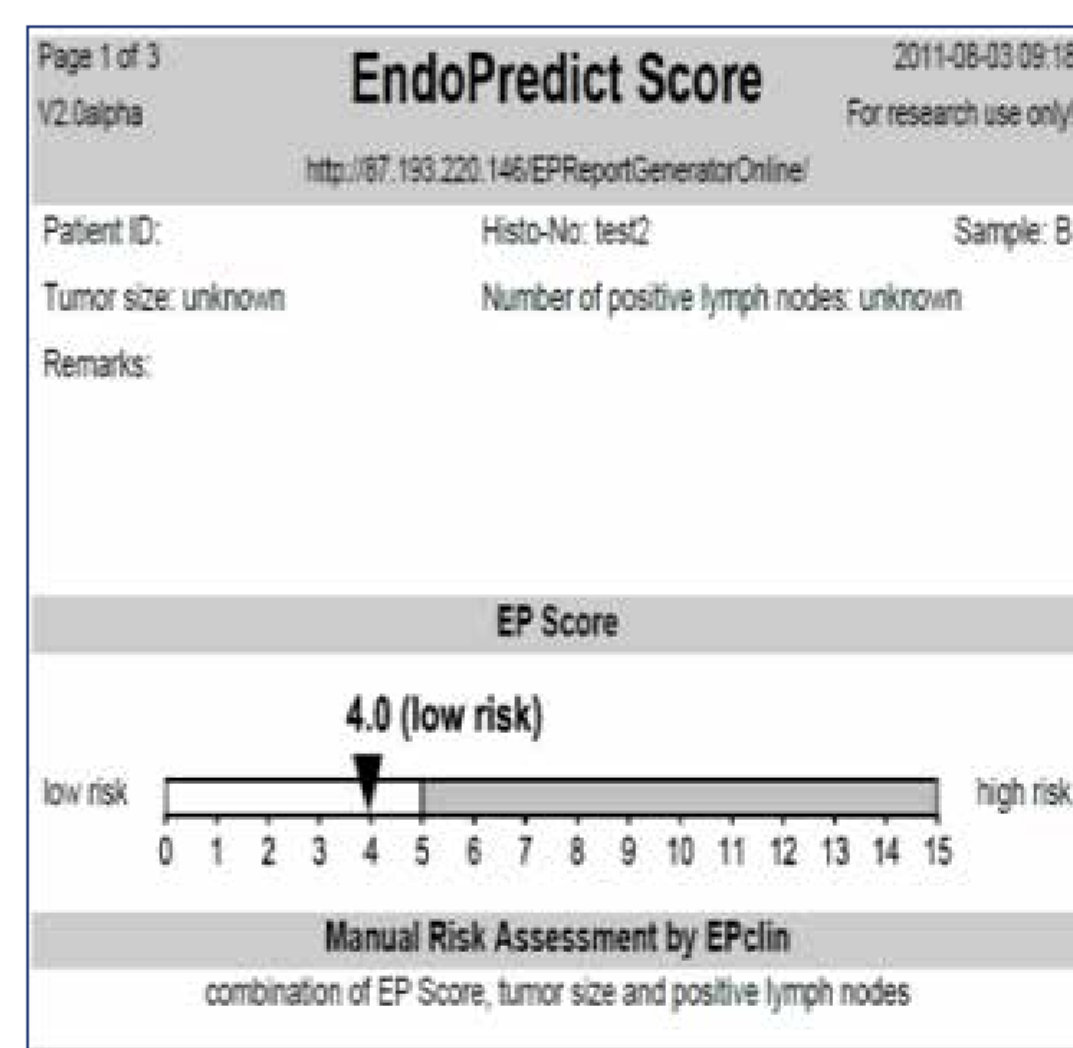
In situ hybridization detecting genetic alterations.



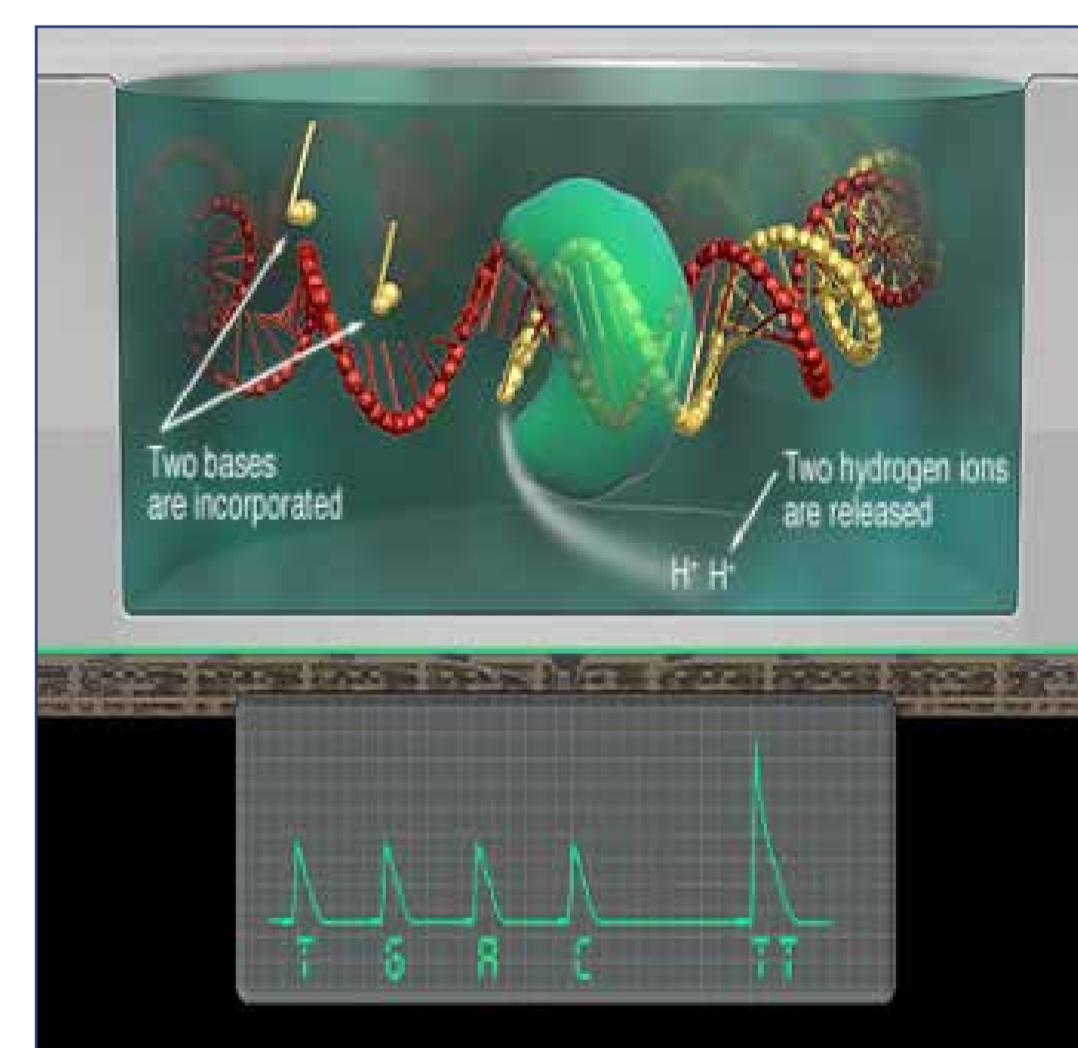
Telepathology for 2nd opinion, quality control and objective quantification.



Sanger- or pyro sequencing for mutation analyses.



Multigene assay Endopredict for breast cancer prognostication.



NGS ( next generation sequencing) for highly parallel cancer mutation analyses.

Precision medicine is based on modern predictive pathology combining classical morphology, immunohistochemistry, digital telepathology and molecular techniques to the benefit of the patient.

基于现代预测病理学结合古典形态, 免疫组化学, 数字远程病理学和分子技术让患者的受益。

09



Malignant tumor cells  
resistant to chemotherapy  
恶性肿瘤细胞 对抗化疗

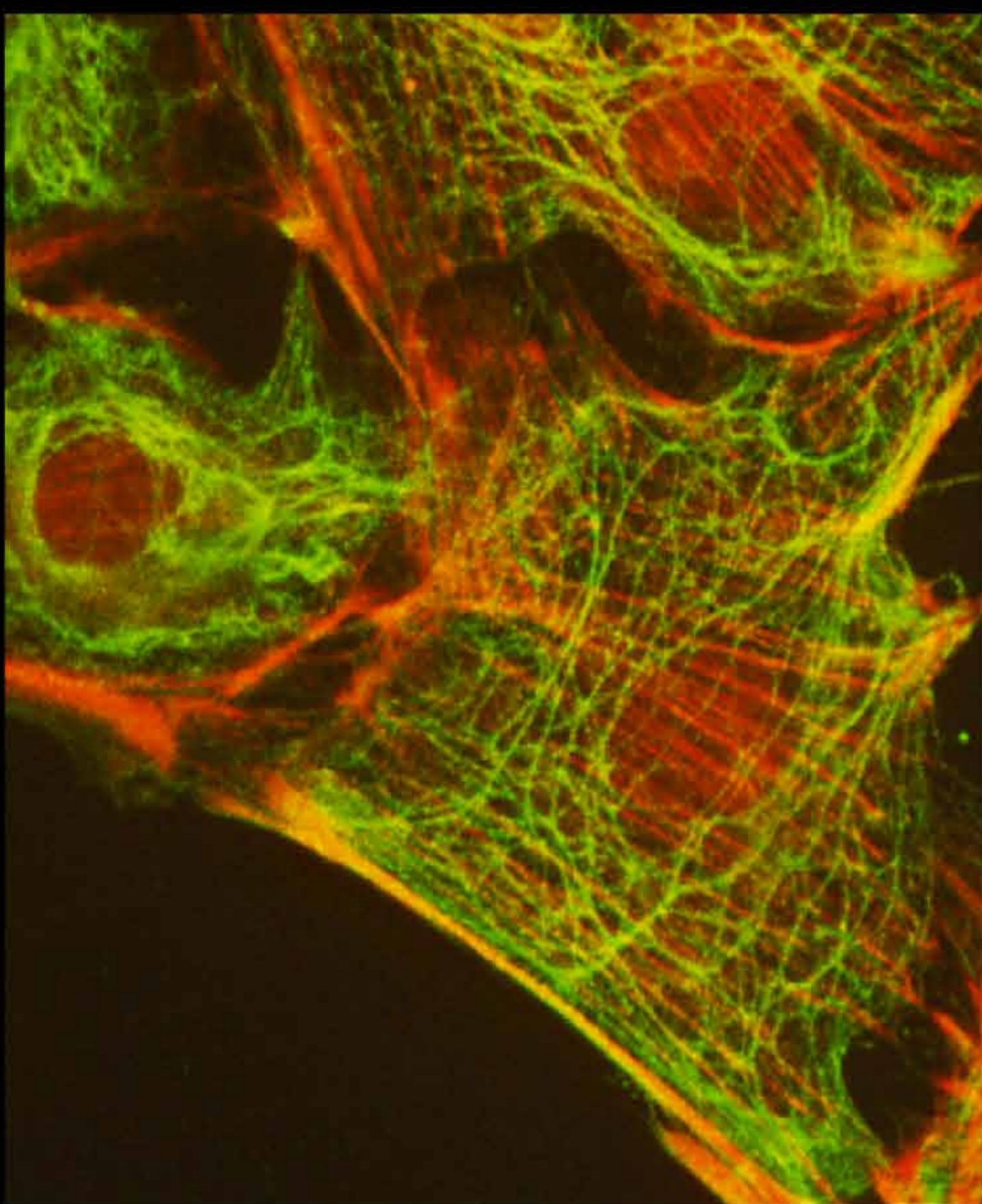


Image by Manfred Dietel, 1997.

The “beauty” of malignancy.  
恶性肿瘤之美

10