For environmental protection, we will not provide paper agenda.
※為響應環保，本次大會將不提供紙本大會手冊
(請掃描 QR code 或儲存本手冊到手機供會議時參考！)

2016 Alishan International Lung Cancer Forum
The 3rd Cross-strait Lung Cancer Summit &
Meeting of Lung Cancer Patients
The 5th Biennial Meeting of International Chinese Society of
Thoracic Surgery (ICSTS)

2016 阿里山國際肺癌論壇
第五屆世界華人胸外科研討會及理事會
第三屆海峽兩岸肺癌高峰論壇暨國際肺癌病友會

嘉義長庚紀念醫院
Chang Gung Memorial Hospital, Chiayi, Taiwan
December 16-18, 2016
iDRIVE™ ULTRA
POWERED STAPLING SYSTEM

POWERED, PUSH-BUTTON PERFORMANCE THAT EMPOWERS YOU

The only fully-powered reusable endostapler is here.
Compatible with Endo GIA™ reloads with Tri-Staple™ technology, the new iDrive™ Ultra powered handle offers one-handed, push-button operation that eliminates manual firing force and improves maneuverability.
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2016 Alishan International Lung Cancer Forum

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第五屆世界華人胸外科研討會及理事會
第三屆海峽兩岸肺癌高峰論壇暨國際肺癌病友會

December 16-18, 2016

Alishan House conference room (阿里山賓館 國際會議廳)
Chang Gung Memorial Hospital, Chiayi, Taiwan (嘉義長庚紀念醫院國際會議廳)

嘉義長庚紀念醫院 Chang Gung Memorial Hospital, Chiayi, Taiwan
長庚國際肺癌中心 (Chang Gung International Lung Cancer Center, CGLCC)
北京大学人民醫院胸外科暨胸部微創中心 (Thoracic Surgery PKU people’s hospital)
世界華人胸外科學會 (International Chinese Society of Thoracic Surgery, ICSTS)
中華肺癌復康協會 (Chinese Lung Cancer Recuperation Association, CLCRA)
新里程美家國際醫療 (New Journey Hospital Group, NJHG)

共同主辦

臺灣胸腔暨重症加護醫學會
臺灣胸腔及心胸外科醫學會
台醫健康管理有限公司
臺灣肺癌學會
協辦
Welcome Message

Dear Colleagues,

It’s our great honour to welcome you to the 2016 Alishan International Lung Cancer Forum (The 3rd Cross-strait lung cancer summit) in conjunction with the 5th Biennial meeting of International Chinese Society of Thoracic Surgery (ICSTS) which will be held from December 16th to 18th, 2016, in Chang Gung Memorial hospital Chiayi, Taiwan. As an academic gathering held every two years, the meeting will provide a stimulating opportunity for us to share experiences and discuss treatment strategies in the related fields. The aim of this meeting is to provide a single, high-profile, internationally renowned forum for research in the updated diagnosis and treatment of lung cancer as well as the practice of advanced thoracic surgery.

Over the years, the ICSTS meeting has been instrumental in the advancement of thoracic surgery as evidenced by the number of successful meetings held thus far. The 2016 Alishan International Lung Cancer Forum held in Chaiyi Chang Gung Hospital once again present the most up-to-date scientific program which covers a wide range of lung cancer topics to be presented by the invited speakers as well as keynote lecturers. The congress not only serves as a meeting place for colleagues of different disciplines of lung cancer to discuss current lung cancer management but also have the chance to exchange their knowledge and experiences to provide lung cancer patients with individualized, tailored care and treatment.

We are here to extend our sincerest welcome to all participants and faculty members to come to Chiayi Taiwan. Wish all of you have a joyful experience in this beautiful and friendly city.
Sincerely yours,

(Ying-Huang Tsai)  (Jun Wang)  (Hui Ping Liu)

(Congress Co-Chairman)
大家好！
由臺灣長庚紀念醫院國際肺癌中心，世界華人胸外科學會，北京大學人民醫院胸外科暨胸部微創中心，中華肺癌複康協會聯合主辦的“2016 阿里山國際肺癌論壇 (第三屆海峽兩岸肺癌高峰論壇)暨國際肺癌病友會及第五屆世界華人胸外科研討會及理事會”於 2016 年 12 月 16-18 日在臺灣嘉義長庚紀念醫院召開。我謹代表大會誠摯地歡迎各位的到來。
這次高峰論壇主要的議題有：1、肺癌早期預防篩查；2、肺癌多學科的診治；3、肺癌最新基因檢測技術與精准治療；4、肺癌免疫治療；5、肺癌中西醫個體化輔助治療。內容涉及現階段最新，最前沿的微創肺癌外科手術；中西醫多學科綜合治療以及肺癌質子分子靶向治療等各個方面。
本次大會提供海峽兩岸同行在肺癌臨床研究領域提供了一個相互交流合作的平臺，同時也和國際肺癌領域的專家進行相互交流。
我們非常榮幸能邀請到各位來參與本次會議，您們的到來使大會增添光彩，再次衷心歡迎您們！
祝福各位嘉賓會議期間身心愉悅！

蔡熒煌
嘉義長庚紀念醫院 院長
各位专家及与会代表们大家好！

我们谨代表世界华人胸外科学会（ICSTS）大会组委会及理事会欢迎各位同道参加本次由台湾嘉义长庚纪念医院国际肺癌中心、世界华人胸外科学会、北京大学人民医院胸外科暨胸部微创中心、中华肺癌康复学会联合主办的“第五届世界华人胸外科研讨会及理事会暨2016阿里山国际肺癌论坛（第三届海峡两岸肺癌高峰论坛及国际肺癌病友会）”，我们热烈欢迎各位的到来！

世界华人胸外科学会于2005年11月在台湾林口长庚纪念医院成立，学会在各位同道的共同努力下，至今已度过十年。学会成立宗旨在于（一）促进华人胸外科学术和研究方面的经验交流（二）推广大力支持现代胸外科理论和技术研究及其（三）提升华人在胸外科学术和研究方面的国际地位。在过去十年期间，在各位同道的共同努力下，我们一起在厦门、南京、北京等地举行每两年一届的学术大会使我学会不断壮大，今天为了华人胸外科发展的再提升，我们又一次相聚并聚焦国际肺癌最新进展，提供了一个海峡两岸专家相互交流合作的平台，同时也和国际肺癌领域的专家进行相互交流。

本次会议特别感谢嘉义长庚纪念医院蔡院长及医院单位各部门主管们的，新里程美家国际医疗等赞助商家的大力支持和筹备组委会们进行了辛勤的筹备工作，使得会议内容如专题讲座、学术交流、国际肺癌病友会等交流形式丰富多彩极具特色。祝各位专家及与会代表们，在会议期间身体健康，万事如意！谢谢大家！再次欢迎大家并祝贺大会圆满成功！

（王俊）（刘会平）
世界华人胸外科学会大会共同主席
Friday, December 16

阿里山森林呼吸日出論壇

I. Alishan Shinrin-Yoku Therapy II. Forest Bathing & Sunrise forum

(Alishan House conference room 阿里山賓館國際會議廳)

14:00 p.m. – 18:00 p.m.  Registration
15:00 p.m. – 17:00 p.m.  Shinrin-Yoku Therapy (Forest Bathing)
17:30 p.m. – 18:45 p.m.  Dinner
18:45 p.m. – 19:00 p.m.  Welcome Message !

19:00 p.m. – 22:00 p.m.  Alishan Forest Bathing Forum 阿里山森林呼吸論壇:

Theme: Ground Glass Opacity (ies): The Troublemaker!

19:00 p.m. – 20:00 p.m.  GGO lung nodule  Part I: MDT forum
Moderator(s):  YC Wu (吳怡成)  MJ Hsieh (謝孟哲)
1. Screening & early detection  YC Lin (林裕清)
2. Ground glass opacity: Radiologist’s view  KM Yeow (饒啟明)
3. CT guide lung biopsy and localization technique  Yu San Liao (廖玉山)
4. GGO/Multifocal disease of the lung  MS Lu (呂明憲)

20:00 p.m. – 20:30 p.m.  GGO lung nodule  Part II: Meet the experts!
Moderator:  Mark Ferguson  YH Tsai(蔡熒煌)
Q&A: Detection of GGO lesion(s): Who should “alarm of risks”?
Q&A: Management of GGO lesion(s): What is the treatment of choice?
Panelist’s comments:
Radiologist: KM Yeow (饒啟明)
Pulmonologist: Chun-Xue Bai (白春學)
Medical Oncologist: Jie Wang (王潔)
Radiation oncologist: Zhongxing Liao (廖仲星)
Surgeon: T.Agasthian, Sookwhan sung
Discussants / Panelists: All participants

20:30 p.m. – 21: 00 p.m.  Keynote speech
Moderator(s):  HP Liu (劉會平)  CC Wang (王金洲)
腫瘤內科主任醫師  教授  北京中國醫學科學院腫瘤醫院
Cancer hospital Chinese academy of medical sciences

21:00 p.m. – 21:30 p.m.  Q & A!

Adjourn!
Saturday, December 17

05:00 a.m. – 09:00 a.m.
阿里山觀日出！森林浴！(氣溫3-8°C)
Forest Bathing & Sunrise forum (Temperature 3-8°C)

☆☆☆ 09:00 a.m. – 12:00 p.m. ☆☆☆
※ 離開阿里山前往嘉義長庚紀念醫院國際會議廳
※ Leave Alishan to Chiayi Chang Gung Memorial Hospital

******************************************************************************

Chang Gung International Lung Cancer Center

關懷生命 追求卓越 A New Journey in Life!
長庚國際肺癌中心 - 提供多學科全人全程、精准診療方案！

為提供全面及更為優質的肺癌病患身心治療服務，本院於 2015 年 11 月成立長庚國際肺癌中心。由蔡熒煌院長、劉會平教授領軍籌畫，集結長庚體系四大院區肺癌精英包括：胸腔內科、胸腔外科、腫瘤內科、放射腫瘤科、病理科、中醫科、呼吸治療科、復健科、營養科及精神心理等領域專家，依據國際治療指引設計個人化最佳精准醫療方案，於肺癌不同治療階段，提供多學科綜合診療及出院後規劃完整復原方案，以期全面全程解決肺癌病患身心靈相關問題。

服務專案包含：
肺癌微創手術：(高清 3D 手術影像系統)
最新標靶及免疫治療：全組基因突變檢測，可提供免疫治療療效預測及標靶藥物用藥建議
胸腔內溫熱化學療法：胸膜轉移觧決方案
放射治療：立體精準定位，減少正常組織傷害
質子治療(林口)：臺灣唯一及首個質子治療中心，可精準定位，減少組織傷害
肺復原中心：為術後呼吸功能快速恢復訂制計畫
其他：包含心理諮詢、身心調適、生活作息調整、運動處方、營養評估指導、中醫針灸、科學中藥(含飲片、膏方)調理、健身功法等身心自我療愈規劃及指導。

服務物件：國內、外來台就醫肺癌病患。

服務內容：
協助國際肺癌病患預約及醫師聯繫
協助療程與旅程規劃
協助簽證所需證明文件聯繫事宜
協助境內交通與住宿安排
到院時接待、陪同診療、關懷訪視
出院協助回診服務
返國後追蹤關懷

諮詢電話：汪小姐 (+886-3-361000 轉 2176、2299)
E-mail：suchmoon@cgmh.org.tw 或 wen7092@cgmh.org.tw
Saturday, December 17

2016 ICSTS Meeting & Lung Cancer Forum   CGMH Hall I
12:00 p.m. – 18:00 p.m.  Registration

12:00 p.m. – 13:00 p.m.   Luncheon symposium & 3-D Video show
12:00 p.m. – 12:30 p.m
Moderator:  MJ Hsieh (謝明儒)  HY Lu (呂宏益)

I. Topic: New devices for VATS lung cancer surgery   Elise Law
   (Symposium by Medtronic (Taiwan) Ltd.)
12:30 p.m. – 13:00 p.m.

II. Topic: 3-D endoscopic VATS surgery (3-D Videos shows)
   Supported by Surgimed Corporation (惠興股份有限公司 STORZ)
   Moderator:  SH chou (周世華)  TP Chen (陳子平)
   Operators:  HP Liu (劉會平)  MS Lu (呂明憲)
1. Introduction of 3-D endoscopic system (3-D Video show)   HC Chen 陳弘哲
2. Single port resection of lung nodule (3-D Video show)   HP Liu (劉會平)
3. VATS Lobectomy for lung cancer (3-D Video show)   MS Lu (呂明憲)
4. Thoracoscopic Esophagectomy (3-D Video show) Optional!

13:00 p.m. – 14:00 p.m   Keynote lecture   CGMH hall I
Moderator(s):  MS Lu (呂明憲)   H Chang (張宏)
Advances in Uni-portal lung cancer Surgery   Diego Gonzalez Rivas

14:00 p.m. – 14:30 p.m   Keynote lecture
Moderator(s):  JY Hsia (夏君毅)  YH Liu (劉永恆)
Proton Therapy for Lung Cancer Treatment   Jun-Jie Wang 王俊傑

14: 30 p.m. – 15:00 p.m   Coffee break 茶歇

15: 00 p.m. – 16:30 p.m   General Session I   CGMH hall I
Moderator(s):  HS Hsu (許翰水)  GC Jiang (姜冠潮)  Y Fong (馮瑤)
Topics & Speakers
1. Combined single-port mediastinoscopy and simultaneous laparoscopy for esophageal
   resection   Qindung Chao (曹慶東)
2. Three-dimensional Vs Two-dimensional VATS esophagectomy for esophageal carcinoma
   Jie Jiang (姜傑)
3. Omitting intrapulmonary LN retrieval may affect the oncological outcome of pN0
   lung cancer patients: a propensity score match analysis   Shi Yan (閻石)
4. Management of bleeding in VATS lobectomy  Sui Xizhao (隋錫朝)
5. Intracordal Hyaluronic Acid Injection for vocal cord Paralysis after thoracic surgery Tuan-Jen Fang (方端仁)

16:30 p.m. – 18:00 p.m.  General Session II  CGMH hall I
Moderator(s):  CW Huang (黃才旺)  KT Kuo (郭光泰)  CS Lin (林振嵩)

Topics & Speakers
1. Applications of near-infrared imaging-guided surgery in thoracic oncology  Fan Yang (楊帆)
2. Alternative surgical platform for thoracic surgery  Yun Hen Liu (劉永恆)
3. Translational Medicine of Lung Cancer Metastasis…from Bench to bedside  QinHua Zhou (周清華)
4. Video-assisted Thoracoscopic lung cancer surgery in Singapore  Agasthian Thirugnanam
5. Minimally invasive lung cancer surgery in Korea  Sookwhan Sung
6. Surgical result of resectable lung cancer: CGMH experiences  Ching Yang Wu (吳青陽)

17:00 p.m. – 18:00 p.m.  國際會議廳 (簡報室)

※Director board meeting of ICSTS (世界華人胸外科理事會議)

18:00 p.m. – 19:00 p.m.  Bus Transportation to Nice Prince Hotel 嘉義市耐斯王子大飯店
19:00 p.m. – 21:30 p.m.  Congress dinner

嘉義市耐斯王子大飯店 5F 宴會廳
5F Ballroom, Nice Prince Hotel, Chiayi city
http://www.niceprincehotel.com.tw/
臺灣嘉義市忠孝路 600 號 Tel: +886-5-2771999
**Concurrent Session!**
**Saturday, December 17**

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
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<tbody>
<tr>
<td>13:00 p.m. - 17:00 p.m.</td>
<td>第四會議廳 (4th Conference Room)</td>
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<td>Consociation meeting of lung cancer patients 国際肺癌病友會</td>
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<td>Organized by Chang Gung Memorial hospital &amp; Chinese lung cancer recuperation association (長庚醫院社服課及中華肺癌復康協會聯合主辦)</td>
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<td>13:00 p.m. - 13:10 p.m.</td>
<td>致歡迎辞: 劉會平 (中華肺癌復康協會理事長)</td>
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<td>13:10 p.m. - 15:00 p.m.</td>
<td>肺癌輔助療法講座 (CAM Lecture)</td>
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<td>Complementary and alternative medicine (CAM) for lung cancer patients.</td>
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<td>Moderator: 謝孟哲 吳清源 黃軒</td>
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<td></td>
<td>1. Nutrition 肺癌飲「食」大解密 蘇玉雪</td>
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<td>2. Exercise planning (肺復原運動給你好呼吸) 鍾安琪</td>
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<td></td>
<td>3. Disability and Reconditioning Exercises for Patients with Lung Cancer 賴逸軒 (肺癌病患之失能與康復運動訓練計畫)</td>
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<td>4. Rehabilitation program (有氧心肺運動及四肢機能肌力訓練) 林佳慧</td>
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<td>5. Traditional Chinese Medicine (肺癌病人之中醫調養) 吳清源</td>
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<td>6. Abdominal acupuncture tx (腹針療法) 薄智雲</td>
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<td>15:00 p.m. - 15:15 p.m.</td>
<td>Coffee Break 茶歇</td>
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<td>15:15 p.m. - 17:00 p.m.</td>
<td>長庚國際肺癌中心 國際中西肺癌專家聯合會診諮詢</td>
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<td>International experts free MDT counseling times! (Mentor room for Fellow &amp; Junior faculty to sit and have informal discussion!)</td>
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**第一會議廳 (1st Conference Room):**  
MDT Teleconsultation (多學科遠程視訊諮詢)  
Case moderator 案例主持人: CY Wu 吳青陽  
International Experts (諮詢專家):  
Sookhwan Sung, Gonz.Diego,呂明憲,王金洲,吳怡成,陳妙芬.....

**第二會議廳 (2nd Conference Room):**  
MDT consultation (多學科諮詢)  
Case moderator 案例主持人: MJ Hsieh(謝孟哲)  
International Experts (諮詢專家):  
T.Agasthian,周清華,楊帆,洪明貴,楊聰明,劉永恆,謝明儒....

**第三會議廳 (3rd Conference Room):**  
Traditional Chinese Medicine (中醫/腹針療法諮詢)  
Case moderator 案例主持人: 吳清源  
International Experts (諮詢專家):  
薄智雲,呉清源,簡季雲.....

**第四會議廳 (4th Conference Room):**  
CAM (輔助療法諮詢)  
1. Nutrition (營養諮詢) 蘇玉雪  
2. Respiratory therapy (肺復原鍛鍊諮詢) 鍾安琪  
3. Rehabilitation program 肺癌康復諮詢 賴逸軒  
4. Exercise planning 康復理療諮詢 林佳慧

**Briefing room (簡報室): MDT consultation (多學科諮詢)**  
Case moderator 案例主持人: 林裕清  
International Experts (諮詢專家):  
Mark Ferguson, 蔡熒煌,王俊,趙珩,劉會平,王智亮,聰敏明,王俊傑....

*Above experts are subject to change! 以上專家可能更改！*
Sunday, December 18

The 3rd Cross-strait Lung Cancer Summit (海峽兩岸肺癌高峰論壇)
The cutting edge of lung cancer therapy (肺癌治療最前沿)

CGMH Hall I

8:00 a.m. - 15:00 p.m.   Registration
8:30 a.m. - 9:00 a.m.   Opening Ceremony & Welcome address:

9:00 a.m. - 10:00 a.m.   Keynote lecture I:
    Moderators:  CT Yang (楊政達)   JM Lee (李章銘)
    Topic: Lung cancer management: an update  Chong-Jen Yu (余忠仁)
    Moderators:  YH Tsai (蔡熒煌)   CJ Yu (余忠仁)
    Topic: Asia pacific guidelines for lung nodule & its strategies in China
            Chun-Xue Bai (白春學)

10:00 a.m. - 10:30 a.m.   Coffee Break

10:30 a.m. - 12:00 a.m.   Keynote lecture II:
    Moderators:  J Wang (王俊)   H Zhao (趙珩)
    Topic: Future trend of thoracic cancer surgery  Mark Ferguson
    Moderators:  MF Cheng (陳妙芬)  JJ Wang (王俊傑)
    Topic: Role of SBRT & Proton therapy on precision treatment of lung cancer
            Zhongxing Liao (廖仲星)
    Moderators:  QH Zhou (周清華)  F Yang (楊帆)
    Topic: Immunotherapy for Lung Cancer Treatment  Cheng-Ta Yang (楊政達)

12:00 p.m. - 13:00 p.m.   Luncheon Special Lecture:  CGMH hall I
International Medical collaboration 國際醫療合作
    Moderator(s):  YH Tsai (蔡熒煌)  LS Wang (王良順)
    1. Hospital Investment and Financing: International Perspective of Mainland China
         醫院投融資:大陸視角國際佈局  Yanglin Lin (林楊林)
    2. MD Anderson Global Academic Programs  TJ Liu (劉達仁)
         MD安德森癌症中心全球學術合作經驗

13:00 p.m. - 14:30 p.m.   General Session I  CGMH hall I
    Moderator(s):  YC Su (蘇英傑)  YK Tseng (曾堯麟)  CL Hong (洪健朗)
    1. Robotic lung cancer resection: Technical Considerations  Jang-Ming Lee (李章銘)
    2. Non-intubated Thoracoscopic lobectomy for lung cancer  Jin-Shing Chen (陳晉興)
    3. Anesthesia technique for Nonintubated thoracic surgery Ya-Jung Cheng (鄭雅蓉)
4. Precision surgical therapy for Locally Advanced NSCLC based on Molecular Staging  QinHua Zhou 周清華

14:30 p.m. - 14:40 p.m.  Coffee Break

14:40 p.m. - 16:30 p.m.  CGMH hall I

Title–Precision medicine & Companion Diagnostics for lung cancer
(肺癌精准醫療及伴隨式診斷)
Moderator(s):  CL Wang (王智亮)  JL Liu (劉淨蘭)  WJ Huang(黃文傑)

Topics & Speaker(s)
1. ctDNA detection in early stage non-small cell lung cancer Kezhong Chen  陳克終
2. Molecular profiling of adjuvant target therapy in NSCLC
   Chin Chou Wang 王金洲
3. Genomic markers for lung cancer:from treatment to monitor
   ShuJen Chen  陳淑貞
4. Mutation spectrum of NSCLC in Taiwan and its clinical implications
   ShiuFeng Hwang 黃秀芬
5. Immunohistology technique for Lung cancer Immunotherapy
   CC Huang 黃昭誠

Concurrent Session!
Sunday, December 18 (14:00 p.m. - 17:00 p.m.)  第二國際會議廳 CGMH hall II

氫分子醫學與肺部疾病講座(Special forum on Hydrogen Medicine):
康志敏 上海潫美醫療科技氫分子醫學研究小組教授
鄭則廣 廣州醫科大學附屬第一醫院呼吸內科主任醫師
   Basic & Clinical application of molecular hydrogen medicine
   Hydrogen inhalation: Potential role for lung cancer management

*********************************** CLOSING ***********************************
Recent advance, including small-molecular agents and monoclonal antibodies targeting driver genes and immunotherapy, had made enormous progress in the treatment and survival of non-small cell lung cancer. The strategy has even now advanced from personalized therapy to precision medicine.

Meanwhile, researchers are trying to further improve the survival of lung cancer by detecting lung cancer in early stage. Low-dose CT is adopted by USPSTF (U.S. Preventive Services Take Force), but is limited for adults aged 55 to 80 years who have a 30 pack-year smoking history and currently smoke or have quit within the past 15 years and those who are good candidate to have curative lung surgery. Unmet issues remain to be solved.
Ground glass opacity: Radiologist’s view  KM Yeow (饒啟明)

饒啟明 Yeow, Kee-Min

EDUCATIONAL BACKGROUND: Radiology
Country  Taiwan ROC

Current Affiliation
Chang Gung Memorial Hospital at Taipei
Chang Gung University, School of Medicine

Areas of Interest (Specialty)
Interventional Radiology, Brachial Plexus Imaging

Education
1985 graduated from Taipei Medical University, MD
1985-1989 Residency at the Department of Diagnostic Radiology, Chang Gung Memorial Hospital at Linkou.
1989 Board Certified Radiologist Taiwan ROC.

Post-Graduate Education
Vascular Radiology Visiting Fellowship, MGH, Boston, USA. Neurovascular laboratory MGH (R. Ackerman).
Non-invasive peripheral vascular laboratory, Brigham & Women Hospital (J Polak).
1997 Aug 1-1997 Oct 22
Vascular Interventional Radiology Visiting Fellowship, Miami Vascular Institute, Florida, USA.
Non-invasive peripheral vascular laboratory
1997 Dec Hepatoma RF ablation Visiting Fellowships (Italy: S. Rossi, T. Livraghi, F. Gabagniati).
1998 Jan Hepatoma microcatheter embolization Visiting Fellowship (Japan: O. Matsui)

1991 Sept-1994 Sept Director of Department of Radiology at Chi Mei Foundation
Hospital Tainan.
1994 Oct-2001 July Lecturer, Attending Radiologist at Chang Gung Memorial Hospital at Linkou.
2001-2004 Assistant Professor of Radiology, CGMH at Linkou.
2004 July-2008 July Director of Department of Imaging and Intervention at Taipei, CGMH
2004-present Associate Professor of Radiology in Department of Imaging & Intervention, Chang Gung Memorial Hospital at Taipei.
2004-present Associate Professor in the School of Medicine, Chang Gung University

Professional Affiliations and Scientific Publications
The Radiological Society of the ROC.
The Formosan Medical Association, Taiwan.
The Society of Ultrasound in Medicine, Taiwan.

Publications:
50 peer review papers
15 oral presentations
3 poster presentation
26 invited talks

Abstract
Nodular Ground Glass Opacity (nGGO): Radiologist’s Perspective And Suggestive Features Of Malignancy

I. INTRODUCTION / DEFINITION: CT detected nodular ground glass opacity (GGN or nGGO 毛玻璃結節) most often appears as a circumscribed spherical area of increased lung attenuation with preserved adjacent bronchial and vascular margins. If related to lung carcinoma, it often evolutes into a part solid nodule—>solid nodule as it increases in size while a significant number of nGGOs stay stationary.

II.CHARACTERIZATION: nGGO can be characterized by its density and size:
-partly solid (part of the ground-glass opacity completely obscures the hypo-density air parenchyma, a vessel through the lesion is not counted as solid part although a vessel looks solid in density).
-pure nGGO, non-solid (a full faint translucent hypo-dense opacity) - pure ground glass nodules. The incidence of cancer in partly solid nGGO can be as high as 63% in one report. GGOs <10mm grow very slowly over periods of years. Incidence of lung cancer is much lower, thus may be followed up until solid part appears.

Histologically, GGOs may represent:
A. MALIGNANT:
- primary (e.g. bronchoalveolar carcinoma (BAC), adenocarcinoma in situ (CIS), minimally invasive adenocarcinoma (MIA) and invasive adenocarcinoma.
-metastases: occasionally can manifest as ground glass density nodules

B. BENIGN: - atypical adenomatous hyperplasia (AAH), - focal interstitial fibrosis, - aspergillosis / cryptococcosis, - focal pulmonary hemorrhage

III. WHY nGGO IS IMPORTANT: The carcinogenesis pathway of gradual evolution of pure nGGOs by increasing in size, and adding on solid part until they becomes complete solid, was well established. Noguchi first named early lung carcinoma into grade A, B, C, D, E, F according to percentage of solid part as early as 1995.

IV. METHOD OF DETECTION: Chest X-rays fails to detect nGGOs < 1.5cm in size because of their faint density. In 2011, a conclusive lung cancer screening trial using LDCT for the first time demonstrated lung cancer mortality reduction by 20%. Since then, many healthy subjects ask for self funded LDCTs for lung cancer screening, as a result reading LDCTs become a daily routine for the Radiologists.

V. HOW I CHARACTERIZED nGGOs IN MY PRACTICE: LDCT axial images were reconstructed into 2mm/2mm without gap (use for characterization of solid part of GGO), sagittal 5mm/5mm without gap (use to demonstrate its spherical shape of GGO) are just what are needed (radiation dose=6-8 CXRs); DON’T ORDER HRCT because mediastinal window image which better shows solid part of GGO will not be reconstructed per HRCT protocol.

VI. HOW I REPORT CT ON nGGO: I use a structured standardized reporting system for better interdisciplinary communication.

*LungRADs (lung reporting and data systems) version 1.0 American College Of Radiology 2014. The threshold of recommendation for surgical resection by Radiologist, Pulmonologist and Chest Surgeon should be established in order to reduce radiation dose and avoid risks of unnecessary operative resection.

VII. PRE OPERATIVE LOCALIZATION TO FACILITATE VATS wedge resection or segmentectomy. CT guided coaxial cutting needle biopsies of nGGO <20mm were practiced in early 2000s, but not recommended now because of inadequate tissue sampling and for fear of pulmonary hemorrhage in view of cutting of aerated lung adjacent to the GGO. Instead, suspicious nGGOs (LungRADs category 4 and above with an estimated risk of cancer >15%) can be targeted by CT-guided preoperative localization using hookworm or methylene blue staining to facilitate surgical resection because the GGOs are often not visible or palpable during surgery. Hook wires were often used for lesion >10mm situated >15mm from pleural surface with adequate lung tissue for hook anchoring. Methylene blue staining may be used in pure nGGO <10mm or lesions within 10mm from pleural surface where hook anchoring can be problematic; Use a combination of hook wire in one direction of puncture coupled with one or more methylene blue staining from same or different directions are feasible when simultaneous resection of multiple nGGO are performed in one
operation are planned.

CT guide lung biopsy and localization technique  Yu San Liao (廖玉山)

廖玉山醫師 Yu San Liao
專長放射線介入性治療，PTA
現職
雲林長庚醫院放射診斷科主治醫師
嘉義長庚醫院放射診斷科主治醫師
學歴
高雄醫學大學醫學系
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雲林長庚醫院放射診斷科主治醫師
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嘉義長庚醫院放射診斷科住院醫師

Language: Chinese, Taiwanese, English

Education: 1993-2000 Department of Medicine, Kaohsiung medical University, Taiwan
Employment Record:
1999-2000, intern, Kaohsiung medical University Hospital, Taiwan
2000-2001, air force doctor, Pingdone air force, Taiwan
2001-2004, resident doctor, Department of Diagnostic Radiology, Chang Gung Memorial Hospital, Kaohsiung, Taiwan
2004-2005, chief resident, Department of Diagnostic Radiology, Chang Gung Memorial Hospital, Kaohsiung, Taiwan
2005-2009, Visiting staff, Department of Diagnostic Radiology, Chang Gung Memorial Hospital, Chiayi, Taiwan
2010-now, M.D. Chief of Diagnostic Radiology, CGMH, No.707, Gongye Rd., Mailiao Township, Yunlin County, Taiwan.
2014-now, P.H.D student at Department of Chemistry and Biochemistry, National Chung Cheng University, Chiayi, Taiwan

Licensers: Chinese Medical Practice License NO.: 032015
Chinese Radiologist License NO.: 657

Professional Affiliations: The Radiology Society of the Republic of China (Taiwan)

Abstract:
Percutaneous CT-guided needle biopsy of mediastinal and pulmonary lesions is a minimally invasive approach for obtaining tissue for histopathological examination. Although it is a widely accepted procedure with relatively few complications, precise planning and detailed
knowledge of various aspects of the biopsy procedure is mandatory to avert complications.

# Purpose:
Histopathologic diagnosis of lung, pleura or mediastinum tumors/lesions
Tiny/small central located lung nodule localization for OP
Good quality baseline ENHANCED-CT for well evaluation

# Procedures and Techniques:
Set IV line at least 18-20G for emergent use
O2, set monitors,
sedation for small childs
local anesthesia for puncture site (close but not through pleura)
Choose biopsy needles (for soft tissue, for bones ?) (fine needle aspiration:20-25G; core biopsy: 18-20G) and coaxial sheath/needles
More complications were reported when needles larger than 18G
Choose a longer needle than the target lesion depth (when pneumothorax)
Specimen notch (1 cm or 2 cm)
Find The SAFE route (avoid: great vessels, bulla, bone, ribs inferior border, puncture bronchus<fistula>, ----)
Patient positioning: Prone is better than supine, lateral decubitus is worst
Breath hold is important for target lesion close to diaphragm
Avoid deep inspiration of patient
Avoid tearing large area pleura
IV contrast medium whenever needed
Choose skin puncture site and maintain needle angulation
Image thickness (2-3 mm)
Lesion close to pleura: avoid needle dislogement when biopsy route is shallow
Mediastinum lesions: Para- sternum, para-spine, Trans-pulmonary approach

# Complications
Air embolism: stroke, AMI---pulling air into pulmonary veins than heart than aorta
Pneumothorax: (27-54 %) 3-15% need chest tube, pneumomediastinum
Hemorrhage: (5-17%); hemoptysis (2-5%, more at chronic bronchitis)
Tumor seeding, Fistula
Ground-glass opacity (GGO) is a radiological finding in computed tomography (CT) consisting of a hazy opacity that does not obscure the underlying bronchial structures or pulmonary vessels. Pure GGOs are those with no solid components, whereas part-solid GGOs contain both GGO and a solid component. Pulmonary nodules with GGO have been increasingly encountered in routine clinical practice with the increasingly widespread use of CT and the increased resolution of CT imaging. The recent positive results of the National Lung Screening Trial, which reported a 20% decrease in mortality from lung cancer as a result of low-dose CT screening for patients at high risk of developing lung cancer, are anticipated to support the use of CT examinations and to increase the detection of GGO lesions. GGO can be a manifestation of a wide variety of clinical features, including malignancies and benign conditions, such as focal interstitial fibrosis, inflammation, and hemorrhage. However, lesions with GGO that do not disappear are often lung cancer or its precursor lesions. Favorable prognoses for the surgical resection of lesions with a considerable amount of GGO have been reported in several retrospective studies, in which the relapse rate was reported to be null. Because some lesions with GGO remain unchanged for years, it is unclear whether all such lesions should be surgically resected, including those that microscopy shows to contain cancer cells. It has also not yet been established which surgical procedures are well-balanced. In this article, we review the literature on GGO, with special emphasis on management of GGO-predominant pulmonary lesions.
Targeted Systemic Therapy: an update  Jie Wang 王潔

中國醫學科學院腫瘤醫院 腫瘤內科主任醫師
擅 長：
胸部腫瘤尤其是肺癌、胸膜間皮瘤、胸腺腫瘤的規範化、個體化、多學科綜合治療；尤
其在肺癌基因分型個體化診治方面引領國內走向
執業經歷：
王潔，女，主任醫師，教授。內科學博士、腫瘤學博士後。1987 年大學畢業任內科大夫。
月作腫瘤學博士後研究。1999 年 6 月迄今任北京大學臨床腫瘤學院和北京腫瘤醫院副主
任研究生導師。
中國抗癌協會肺癌專業委員會常委，CSCO 執行委員，北京市醫學會腫瘤專業委員會副
主任委員，中國臨床腫瘤學會小細胞肺癌專家委員會副主任委員，中國臨床腫瘤學會肉
瘤專家委員會副主任委員。Clin.Lung Cancer，中華結核與呼吸雜誌及中國肺癌雜誌、
Thoracic Cancer 編委，中國胸部腫瘤協作組（Chinese Thoracic Oncology Group, CTONG）
委員。迄今培養博士研究生 5 名，碩士研究生 20 余名。
多年來一直致力於肺癌規範化、個體化、多學科綜合治療及相關研究。2002 年 12 月至
2004 年 12 月接受美國 NCI“Oncology Research Faculty Development Program”資助，於
M.D.Anderson Cancer Center 胸部腫瘤內科學習肺癌為主實體瘤臨床治療及相關應用基
礎研究，豐富了肺癌個體化多學科綜合治療臨床經驗，對肺癌發生發展過程中分子機制
及其相關研究有深入瞭解與認識。積極探尋肺癌預測分子靶向和化療治療療效、預後的
分子預測標誌，部分研究成果已應用於臨床實踐。
專業特長：
從事腫瘤臨床工作多年，對胸部腫瘤尤其是肺癌、胸膜間皮瘤、胸腺腫瘤的規範化、個
體化、多學科綜合治療具有豐富經驗及深厚的學術造詣，尤其在肺癌基因分型個體化診
治方面引領國內走向，擅長將臨床實踐與轉化研究成果有機結合，指導臨床。
研究成果：
作為課題負責人多次承擔國家自然科學基金、國家 863 科技支撐項目、北京市首發基金
等研究。國内外腫瘤核心期刊 J Clin. Oncol, Cancer Research, Clin Cancer research 等雜誌
發表論文 100 餘篇。2008 年入選國家“十、百、千”人才計畫。2010 年獲得國家自然科
學基金“傑出青年基金”資助。獲 2011 年中國青年女科學家獎及北京市學科帶頭人基金。
先後獲得中國抗癌協會科技進步一等獎、北京市科技進步三等獎、中華醫學會醫學獎三等獎、教育部科技成果二等獎、華夏科技成果二等獎等。

社會任職：
兼任中國抗癌協會肺癌專業委員會常務委員，北京醫學會腫瘤專業委員會副主任委員，中國臨床腫瘤協會（CSCO）執行委員，中國抗癌協會小細胞肺癌專家委員會副主任委員，中國抗癌協會肉瘤專家委員會副主任委員；《中華結核與呼吸雜誌》編委，《中國肺癌雜誌》編委，《Clinical Lung cancer》、《Thoracic Oncology》編委。

When researchers discovered that a mutation in the gene EGFR was involved in the growth and spread of lung cancer, they began to study EGFR inhibitors—targeted treatments that could block the mutation. (Ten percent of people with lung cancer have EGFR mutations.) Today, three medications are effective treatment options for lung cancer patients with this gene mutation:

- Erlotinib (Tarceva and others). The U.S. Food and Drug Administration (FDA) first approved the use of erlotinib for lung cancer in 2004. In 2013, it was approved as an initial treatment for patients with NSCLC that has spread to other parts of the body and has certain types of EGFR mutations or a piece missing (deletion) from this gene.

- Afatinib (Gilotrif). In 2013, the FDA approved afatinib for the initial treatment of metastatic NSCLC in patients with the same EGFR gene mutations or deletions as those who can be treated successfully with erlotinib.

- Gefitinib (Iressa). In July 2015, the FDA approved gefitinib for the first-line treatment of patients with NSCLC whose tumors harbor specific types of EGFR gene mutations, as detected by an FDA-approved test.

Another gene mutation found in some lung cancers is referred to as ALK. Two targeted treatments are effective options for people whose cancer has this gene change:

- Crizotinib (Xalkori). This treatment was approved by the FDA in 2013 for treating metastatic NSCLC tumors with the ALK gene mutation. Crizotinib blocks the mutated ALK gene, stopping the growth of the tumor. After being studied in clinical trials, it was found to be more effective than chemotherapy.

- Ceritinib (Zykadia). This medication was approved in 2014 for people with metastatic ALK-positive lung cancer who cannot tolerate crizotinib or whose cancer continued to grow while being treated with crizotinib.

Because the genes of cancer cells can evolve, some tumors may become resistant to a targeted treatment. Medications to meet those challenges are being studied now in clinical trials, which often offer important treatment options for people with lung cancer.
Recent advance in Uniportal VATS lung cancer surgery    Diego Gonzalez Rivas

Dr. Diego Gonzalez Rivas is a graduate of Santiago de Compostela University and the College of Physicians & Surgeons of Coruña University (MD). He received training in General Surgery, Thoracic Surgery, and lung transplantation at Coruña University Hospital. After completing a year working in Santiago University Hospital joined the faculty at Coruña Hospital and is currently Thoracic Surgeon in Coruña University center and an active member of lung transplantation program (40 cases per year). He is the creator of Minimally invasive thoracic surgery Unit (UCTMI) working at Quiron Hospital, San Rafael and Modelo medical center. Actually he works in these 4 medical hospitals at Coruña city and in Shanghai Pulmonary hospital, in Shanghai (China). He is the director of the uniportal VATS training program at Shanghai Pulmonary Hospital (biggest thoracic center in the world).

Dr Gonzalez Rivas serves on several editorial boards, he is reviewer of many scientific journals and he is the organizer of the annual meeting of Spanish society of thoracic surgery (SECT) from 2014-2017. He also collaborate with educational activities of European Society (ESTS) and International Society of Minimally Invasive Cardiothoracic Surgery (ISMICS).

He is a board European certificated surgeon since 2010 (FECTS). He started to perform VATS lobectomies in 2007 after learning the technique at Cedars Sinai. After 100 major resections performed he visited Duke medical center to learn the double port technique with Dr Thomas Damico. Once experience was gained with this technique he evolved to single-port approach.

He was pioneer surgeon in the world performing uniportal VATS lobectomies (first case in June 2010) and non-intubated uniportal major pulmonary resections (first case in April 2014). He has published several papers describing these procedures and the results in the most important medical journals and textbooks of thoracic surgery. More information about the technique in www.videothoracoscopy.com

INTERESTS
Uniportal VATS lobectomy and segmentectomy
Minimally invasive thoracic surgery
Uniportal VATS sleeve resections
Uniportal VATS subxiphoid surgery
Advanced lung cancer surgery
Robotic surgery
Lung Transplantation
Video edition
Surfing

Uniportal video-assisted thoracic surgery (VATS) has been established as an alternative surgical approach for the treatment of most intrathoracic conditions. The potential benefits of a better view, anatomic instrumentation, better cosmesis and potential less postoperative pain and paraesthesia have led this approach to become of increasing interest worldwide. Performing surgery through a single incision approach represents an evolution of VATS to a less invasive approach. VATS was developed in 2010 for major pulmonary resections, initially for early stage tumours but now it’s being used for advanced cases as well. Uniportal VATS represents a radical change in the approach to lung resection compared to the conventional three-port VATS. Since the placement of all the surgical instruments and the camera is done through the same incision, Uniportal VATS can pose a challenge for both the surgeon and the assistant. Recent industry improvements such as the specifically designed surgical instrumentation with double articulation, improvements in high definition video-camera systems, new energy devices and more narrower and angulated curved tip staplers have made single-port VATS, for major lung resections, easier to adopt and learn than conventional VATS. The demonstrated benefits of geometrical characteristics of the technique enables expert surgeons to perform complex cases and reconstructive techniques, such as broncho-vascular procedures or even tracheal and carinal resections.

In addition, the uniportal technique has recently evolved to a concept that could be named “uniportal advanced VATS”. This development could be described as a way of performing surgery with the least number of devices possible, reducing this way a possible compression over the intercostal space when multiple instruments are introduced through a single incision. The bimanual instrumentation is key as well as the use of 2 specific instruments: a long curved stainless steel Dennis suction on the left hand and an energy device on the right hand. The coordination of both devices enables a fast and effective exposure as well as dissection and coagulation. Next to this, thanks to new technologic developments, the use of an external articulated arm allows a firm and stable way of fixating the camera without the need of an assistant. The surgeon this way, has more space to work and is therefore more comfortable. It however, requires learning how to manipulate two or three instruments with a single hand. After our initial experience and once our technique, which could be defined as “Uniportal Unisurgeon VATS lobectomy”, is refined, surgery can be performed with the same efficacy and operating time as with the help of an assistant. In our opinion, future
technological developments as well as the experience gained with the uniportal approach will favor this type of surgery with a single surgeon and therefore enabling the optimization of hospital resources. The future of the thoracic surgery is based on the evolution of minimally invasive procedures and innovations directed towards reducing even more the surgical and anaesthetic trauma. We can expect more developments of subcostal or embryonic natural orifice translumenal endoscopic surgery access, evolution in anaesthesia strategies, and cross-discipline imaging-assisted lesion localization for single-port VATS procedures. The development of uniportal surgery with 3D image systems (adapted on the screen, no glasses) and single port robotic technology with wireless cameras in awake or non-intubated patients will be the next revolution in thoracic surgery. We understand that the future goes in the direction of digital technology which will facilitate the adoption of single-port technique worldwide in the next coming years.

**Proton Therapy for Lung Cancer Treatment  Jun-Jie Wang 王俊傑**

職稱(Title)：
助理教授
Assistant Professor

最高學歷(Education)：
美國加州大學分子生物學博士
Ph.D., California State University, USA

研究領域(Research Interest):
放射生物(Radiobiology)
放射治療(Radiotherapy)
分子生物(Molecular Biology)

Lung cancer can be detected with chest X-rays, computerized chest tomography (CT), or positron emission tomography (PET). A biopsy is required to confirm the diagnosis. Once lung cancer is diagnosed, local techniques are generally used in the very earliest stage of lung cancer treatment. If the lung cancer is operable, surgery is the choice for local therapy, but combined therapy – including surgery and radiation including proton therapy for lung cancer
– is often recommended for more advanced disease. If the disease is not operable, then radiation therapy, including proton therapy, is used. The Advantages of Proton Therapy for Lung Cancer Treatment.

When treating lung cancer with traditional radiation, it can be difficult to deliver an effective dose without risking damage to healthy tissue. By using proton therapy for lung cancer treatment, physicians may be able to deliver highly effective and very precise doses of protons to the exact location of the lung cancer.

Proton therapy for lung cancer now appears to be a reasonable treatment for patients whose cancer is limited to the chest. Trials performed at the University of Florida Health Proton Therapy Institute, MD Anderson Cancer Center and other centers demonstrate that proton therapy offers reduced normal lung and bone marrow exposure when compared with conventional photon (X-ray) therapy.

Reducing lung exposure is important because it allows oncologists to increase the radiation dose delivered to the sites of lung cancer without increasing the risk of lung injury. Reducing bone marrow exposure may reduce treatment-related fatigue and, when necessary, allow for the delivery of more intensive chemotherapy during or after proton therapy.

**Combined Uni-portal mediastinal and laparoscopic esophagectomy**

Qindung Chao 曹慶東

曹慶東教授個人簡歷

曹慶東，主任醫師，教授，碩士研究生導師。

中山大學附屬第五醫院 大外科主任兼胸外科主任。

學術兼職：

廣東省醫學會胸外科學分會 副主任委員
廣東省醫學會微創外科學分會胸外科學組 副組長
廣東省醫師協會胸外科醫師分會 常務委員
歐洲胸外科醫師學會（ESTS）註冊會員
亞洲胸心血管外科學會（ASCVTS） 註冊會員

擅長各類胸部（胸壁、胸膜、肺、食管、縱隔）疾病的診治，主要研究方向：胸部微創外科技術。

學術成就：
目前個人完成各種胸部微創手術 4000 餘例，其中包括單孔全胸腔鏡氣管腫瘤切除術、
單孔胸腔鏡肺癌根治術，單孔縱隔鏡食管癌根治術，單孔全胸腔鏡縱隔腫瘤切除術等高
難度胸腔鏡手術。
2009 年 1 月，在國內率先採用 Orvil 技術完成了中國第一例完全胸腹腔鏡聯合食管癌根
治術，解決了以往胸腔鏡下消化道重建的技術難題，2009 年 11 月在《中國微創外科雜
誌》發表了中國第一篇介紹該技術的學術論著，並在國內多家醫院演示了該技術，為該
技術在國內的推廣做出了重要貢獻。
2011 年 3 月，在國內率先提出了單孔胸腔鏡技術的理念並採用自主研發的手術器械成功
開展單孔胸腔鏡手術，並在《中華胸心血管外科雜誌》上發表了中國第一篇介紹該技術
學術論著，至今完成包括肺癌根治術、食管癌根治術、縱隔腫瘤切除術在內的各種單孔
胸腔鏡手術 1000 餘例。近年來，一直致力於在國內推廣單孔胸腔鏡手術技術，多次受
邀在國內重要的胸心外科學術会议上做了關於單孔胸腔鏡技術的專題發言，在國內 20
多家醫院演示單孔胸腔鏡手術。
2016 年 3 月，完成中國首例“單孔充氣式縱隔鏡聯合腹腔鏡食管癌根治術”，將這一目前
全世界最先進的“不開胸食管癌根治術”引進中國，推動了中國微創食管外科技術的進一
步發展。其學術成就受到了業界知名胸外科專家的一致肯定，被國內學術界普遍公認為
“中國單孔胸腔鏡手術的開拓者”。
Open approaches to esophagectomy continue to have high morbidity and mortality rates, and
efforts to decrease the incidence of complications have stimulated interest in minimally
invasive esophagectomy (MIE) (1). First reported in 1995, MIE failed to gain widespread
acceptance in part due to its technically challenging nature and a lack of strong evidence for
improved morbidity and mortality (2). MIE has become increasingly used and accepted, with
reported outcomes comparable with those of open approaches (3). In patients with esophageal
cancer, MIE can be used to minimize surgical invasiveness, provide a better operative field
and reduce peri-operative complications. Compared with conventional open esophagectomy
(OE), MIE is believed to reduce blood loss and shorten hospital stays. The surgical techniques
used can be thoracoscopic, laparoscopic, or both (4-6). This paper presents the principal steps
of three-stage MIE: combined thoracoscopic-laparoscopic esophagectomy with cervical
anastomosis.
Three-dimensional Vs Two-dimensional Video-assisted thoracoscopic esophagectomy for esophageal carcinoma  Jie Jiang 姜傑

The introduction of the three-dimensional video-assisted thoracoscopic esophagectomy (3D-VATE) was designed to overcome some of the disadvantages of 2D-VATE. It offers 24-fold three-dimensional imaging, which is comparable to that of the robotic system in restoring the actual depth perception to surgeons. The learning curve of 3D-VATE is potentially shorter than that of 2D-VATE/robotic-assisted esophagectomy[12-14]. Moreover, the expenses of 3D-VATE is much lower compared to robotic-assisted esophagectomy. The cost-efficiency of 3D-VATE allows wide use in esophagectomies, especially in developing countries such as China. Because the majority of esophageal cancer patients come from rural areas with relatively low social-economic conditions, the use of 3D-VATE could be a more viable alternative for these individuals.
Omitting intrapulmonary lymph node retrieval may affect the oncological outcome of pN0 lung cancer patients: a propensity score match analysis  Shi Yan


Management of bleeding in VATS lobectomy  Sui Xizhao 隋锡朝

醫生簡介：

北京大學人民醫院胸外科主治醫師

學習經歷：

2001年9月－2009年7月 北京大學醫學部臨床醫學八年制本博連讀

工作經歷:

2009年8月－2012年8月 北京大學人民醫院胸外科住院醫師

2009年10月－2010年9月 北京大學人民醫院胸外科住院總醫師

2012年8月至今 北京大學人民醫院胸外科主治醫師

擔任胸外科病房常見疾病的診斷治療工作，掌握胸外科基本手術技巧，包括胸腔鏡及開胸手術，具備較好的綜合能力及臨床經驗。

發表文章:

1.隋錫朝, 李運, 王俊等. 硬質氣管鏡下放置支架治療大氣道阻塞性疾病. 中國胸心血管外科臨床雜誌, 2010,(2).


Intracordal Hyaluronic Acid Injection for vocal cord Paralysis after thoracic surgery
Tuan-Jen Fang (方端仁)

學歷
台北醫學院 醫學系 畢業
美國三藩市加州大學 嗓音吞咽中心 訪問學者
Intracordal hyaluronic acid injection for vocal fold paralysis after thoracic surgery

Background: Thoracic-surgery-related unilateral vocal fold paralysis (UVFP) may cause severe morbidity and can cause profound functional impairment and psychosocial stress in patients with preexisting thoracic diseases. In-office intracordial hyaluronate (HA) injections have recently been applied to improve voice and quality of life in patients with vocal incompetence, but their effect on thoracic-surgery-related UVFP remains inconclusive. We therefore conducted a prospective study to clarify the effect of early HA injection on voice and quality of life in patients with thoracic-surgery-related UVFP.

Methods: Patients with UVFP within 3 months after thoracic surgery who received office-based HA injection were recruited. Quantitative laryngeal electromyography, videolaryngostroboscopy, voice-related life quality (Voice Outcome Survey), laboratory voice
analysis and health-related quality of life (SF-36) were evaluated at baseline, and at 1 month post-injection.
Results: A total of 104 consecutive patients accepted office-based HA intracordal injection during the study period, 34 of whom were treated in relation to thoracic surgery and were eligible for inclusion. Voice-related life quality, voice laboratory analysis, and most generic quality of life domains were significantly improved at 1 month after in-office HA intracordal injection. No HA-related complications were reported.
Conclusions: Single office-based HA intracordal injection is a safe and effective treatment for thoracic-surgery-related UVFP, resulting in immediate improvements in patient quality of life, voice quality, and swallowing ability.

Applications of near-infrared imaging-guided surgery in thoracic oncology  Fan Yang

Fan Yang, M.D., M.Sc.
EDUCATION
Sep-Dec, 2011  Visiting Scholar
Cleveland Clinic, Mayo Clinic, MD Anderson Cancer Center, University of Virginia Medical Center, Memorial Sloan-Kettering Cancer Center
2001 – 2004  Post doctoral Fellow
Tulane University, New Orleans
1999-2001  Master of Science
Peking University Health Sciences Center, Beijing
1994-1999  Medical Doctor
Peking University Health Sciences Center (former Beijing Medical University), Beijing

CLINICAL PRACTICE
Peking University People Hospital, Beijing
2005- 2006  Chief Resident, Thoracic Surgery Department
Peking University People Hospital, Beijing
2006-2009  Attending Physician, Thoracic Surgery Department  
Peking University People Hospital, Beijing  
2006 – Panel Specialist, Surgery Department  
Beijing United Family Hospital, Beijing  
2009 – 2014 Assistant Professor, Thoracic Surgery Department  
Peking University People Hospital, Beijing  
2014 –Professor, Thoracic Surgery Department  
Peking University People Hospital, Beijing  

PROFESSIONAL AFFILIATIONS  
2009- Youth Committee Member, Chinese Society of Lung Cancer (CSLC)  
2010- Member, International Association for the Study of Lung Cancer (IASLC)  
2015-Youth Committee Member, Chinses Society of Clinical Oncology (CSCO) Young  
2016-Youth Secretary-General, Chinese Society of Thoracic and Cardiovascular Surgery (CSTCS)  

Alternative surgical platform for thoracic surgery  Yun Hen Liu 劉永恆  

劉永恆醫師  
現職  
胸腔外科主任  
長庚醫院外科教授  
長庚大學副教授  

經歷  
美國西雅圖華盛頓大學胸腔外科研究員  
哈佛大學 Massachusetts General Hospital 胸腔外科研究員  
美國聖路易華盛頓大學 Barnes Jewish Hospital 胸腔外科研究員  

學會與認證  
臺灣外科醫學會專科醫師  
臺灣胸腔及心臟血管外科學會專科醫師  
臺灣胸腔暨重症加護專科醫師  

Natural orifice transluminal endoscopic surgery (NOTES) proposes the possibility of
less-invasive, incisionless surgery. Initially conceived to replace abdominal procedures, more recently interest has focused on mediastinal and thoracic procedures as possible logical applications of transluminal approaches. A survey of the literature as well as the author's own experience is performed, examining experimental and increasingly human use of mediastinal and thoracoscopic flexible endoscopy. Issues regarding instrumentation, orientation, and best access are discussed. The literature describes both direct transesophageal access to the mediastinum and pleural cavities and submucosal flap access. Other techniques include transgastric, transvesicular, and percutaneous access via a neck incision. Overall, the early results of transesophageal Heller myotomy show the most promise for early clinical adoption. NOTES has an interesting role in thoracic and mediastinal surgery. Although initially thought of as a highly improbable application, the "home run" of per-oral endoscopic myotomy is indicating that the thorax may be one of the most useful places for NOTES.

Translational Medicine of Lung Cancer Metastasis...from Bench to bedside
QinHua Zhou 周清華
Video-assisted Thoracoscopic lung cancer surgery in Singapore

Agasthian Thirugnanam

Dr. Agasthian graduated from National University of Singapore with an MBBS and was admitted as Fellow to the Royal College of Surgeons (Edinburgh and Glasgow) in 1989 and 1990 respectively. He further advanced his skills in cardiothoracic surgery in MAYO Clinic, Rochester, Minnesota, USA from 1994 to 1995 and at the Cleveland Clinic, Cleveland, Ohio, USA from 1995 to 1996.

Dr. Agasthian has been extensively consulted and sits on the panel of many illustrious international advisory boards and committees including national committees for respiratory disease and cardiothoracic surgery as well as programmes for heart and lung transplants. Over and above the routine surgical procedures, Dr. Agasthian has a subspecialty and research interest in:

- Thoracic Oncology
- Esophageal Diseases
- Lung Diseases
- Lung Volume Reduction Surgery
- Lung Transplantation
- Airway Reconstruction
- Thoracoscopy / Minimally Invasive Surgery / VIDS0 Assisted Thoracoscopic Surgery / VATS
- Pediatric Thoracic Surgery. He has made numerous presentations in his area of expertise and has published in international journals including Asian Annals of Cardiovascular and Thoracic Surgery.
Minimally invasive lung cancer surgery in Korea  Sookwhan Sung

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BACKGROUND

School of Medicine Seoul National University (M.D. 1978)
Seoul National University Hospital Cardiothoracic Residency (1978-1983)
Military duty as a doctor(1983-1986)
Seoul National University Hospital Cardiothoracic fellowship (1986-1987)
Seoul National University Hospital Cardiothoracic Staff (1987-)
Associate Professor, Seoul National University School of Medicine(1995-2000)
Professor, Seoul National University School of Medicine(2000-2010.08)
Professor, The Catholic University of Korea (2010.09-)

INTERESTS

Thoracoscopic Surgery
Lung Transplantation
Hyperhidrosis (Thoracoscopic surgery)
Thoracic Surgical Oncology
Esophageal MIE surgery

Minimally invasive techniques usually require a hospital stay of 1-4 days and recovery time after surgery is typically much shorter than with thoracotomy. Although minimally invasive surgery can be used in many situations, not all lung cancer can be removed by minimally invasive surgery, all patients may not be candidates and the techniques may not be available everywhere. Video-assisted thorascopic surgery (VATS) enables doctors to view and work inside of the chest cavity after making between 2 and 4 small incisions (cuts). Typically, one incision is about 2 ½ inches long and the others are half inch long. A tube with a small video camera on its end is inserted through one of the incisions.
Video captured from inside the chest is transmitted onto a computer monitor in the operating room allowing the surgeon to see a magnified view of the chest structures. The surgeon uses special long instruments to perform the lung resection through the other incisions. No rib spreading is needed.

VATS is done under general anesthesia with the patient on their side. Once the surgery is completed, the incisions are closed with sutures and one or two chest tubes are used to drain the chest. Chest tubes are removed one to two days after surgery. Most VATS patients are in the hospital for one day for a wedge resection and three days for a lobectomy. The procedure may not be appropriate in cases involving large tumors (larger than 7 centimeters), tumors that are growing into the chest wall, or tumors that involve the central airway (main bronchial tubes).

*Surgical result of resectable lung cancer  Ching Yang Wu (吳青陽)*

現職
長庚紀念醫院 林口總院 胸腔外科 主治醫師

長庚大學 醫學院 醫學系 兼任助理教授

學歷
中國醫藥大學 醫學系 （2001 年畢）

經歷
長庚紀念醫院 林口總院 外科部 住院醫師

長庚紀念醫院 林口總院 胸腔暨心臟血管外科系 研究員

臺灣胸腔暨心臟血管外科學會 胸腔外科 新秀論文獎
臺灣胸腔暨心臟血管外科學會 胸腔外科 理事長論文獎

臺灣血管外科學會 智慧深耕獎

擁有 15 項外科醫療材料專利

代表著作


Topic: Lung cancer management: an update       Prof. CJ Yu  余忠仁

學歷
國立臺灣大學醫學系學士
國立臺灣大學臨床醫學研究所博士

經歷
臺灣大學醫學院附設醫院實習醫師 1986~1987
臺灣大學醫學院附設醫院內科住院醫師 1987~1990
臺灣大學醫學院附設醫院內科部胸腔內科受訓醫師 1990~1992
臺灣大學醫學院附設醫院內科部胸腔內科主治醫師 1992~Now
臺灣大學醫學院內科助理教授 1997~2004
美國加州大學大衛斯分校研究 1998/9~1999/3
臺灣大學醫學院內科教授 2008~now
臺灣大學醫學院附設醫院內科部胸腔科主任 2007-

Each year, nearly 210,000 Americans are diagnosed with lung cancer. Cigarette smoking is the main risk factor for lung cancer; it is the cause of 85 percent to 90 percent of lung cancers. Although it is much less common, nonsmokers can get lung cancer. There are a number of factors, including exposure to secondhand smoke, radon gas or cancer-causing chemicals that can contribute to a lung cancer diagnosis.

In recent years, there have been some exciting developments in treating lung cancer. Researchers now understand more about the genetic makeup of lung cancer cells. By using genetic tests, doctors can identify specific types of lung tumors and prescribe treatments designed to target them. Immunotherapy has also emerged as a treatment option for certain types of cancers. These advances have made lung cancer treatment safer and more effective, with fewer side effects.
白春學, 男, 教授, 復旦大學附屬中山醫院呼吸內科主任, 研究所所長, 博士生導師, 中山醫院肺部腫瘤綜合診療中心主任。


現為上海市領軍人才和上海市醫學領軍人才, 博士生和博士後導師, 兼任中華醫學會呼吸分會副主任委員, 上海醫學會肺科學會主任委員, 美國胸科醫師學院 (ACCP) 中國負責人, 美國胸科學會 (ATS) 科研促進委員會委員, 中國《國際呼吸雜誌》和《呼吸新視野》雜誌主編, 英國《Journal of Organ Dysfunction》、《中華結核和呼吸雜誌》、《上海醫學》、《中國實用內科雜誌》、《中華肺病雜誌》、《臨床肺科》和《世界感染雜誌》副編輯, 以及“美國呼吸細胞分子生物學雜誌”、“中華醫學會英文版”和“中華醫學會中文版”等多家雜誌編委。

擅長疾病

擅長戒煙、肺腫瘤、肺血管病、慢性氣道疾病等呼吸病診治。

從事呼吸內科和呼吸危重醫學, 主要研究方向為肺損傷和肺癌的分子發病機制和治療。獲得 28 項科研課題資助, 包括牽頭國家自然科學基金重點專案和參加美國 NIH 等重點課題。已發表論文 340 餘篇, 其中 SCI 索引雜誌論文 50 餘篇, 影響因數累計 210 餘分。主編《呼吸系統疾病診斷和鑑別診斷學》、《急性呼吸窘迫綜合徵》、《呼吸病診治原則和質量控制要求》和《呼吸系統疾病的核醫學檢查》, 參編多部專著和教科書。

在國際上最早提出應用無線傳感技術監測呼吸功能並成功研究出樣機, 2009 年 ATS 會刊 (ATS NEWS | VOL.35 NO.7/8, ) 名人錄為此刊登了專題報導, 目前正在研究無線傳感技術在心肺功能監測的全面應用。此外, 還率先應用生物物理技術發展動態即時血氣分析儀, 獲得“一種雙鏈 RNA 及其用途” (專利號: ZL03115489. 1) 和“在體即時光敏感血液鈉離子感測器及其製備方法”等發明專利 (專利號: ZL20051 0110731.2)。

先後獲 2009 年國家科技進步二等獎:“呼吸衰竭的發病機理與治療研究”( 第 2 完成人);
Evaluation of Pulmonary Nodules: Clinical Practice Consensus Guidelines for Asia

BACKGROUND:
American College of Chest Physicians (CHEST) clinical practice guidelines on the evaluation of pulmonary nodules may have low adoption among clinicians in Asian countries. Unique patient characteristics of Asian patients affect the diagnostic evaluation of pulmonary nodules. The objective of these clinical practice guidelines was to adapt those of CHEST to provide consensus-based recommendations relevant to practitioners in Asia.

METHODS:
A modified ADAPTE process was used by a multidisciplinary group of pulmonologists and thoracic surgeons in Asia. An initial panel meeting analyzed all CHEST recommendations to achieve consensus on recommendations and identify areas that required further investigation before consensus could be achieved. Revised recommendations were circulated to panel members for iterative review and redrafting to develop the final guidelines.

2006年中華醫學一等獎：“呼吸支援技術臨床應用研究”（第3完成人）；2005和2009年分別獲得上海市優秀發明選拔賽一等獎和金獎（第1完成人）；以及“國家醫藥衛生科技進步三等獎”兩次和其它多項獎勵。

肺結節主要是指肺實質內單發或多發直徑不超過3 cm的圓形或類圓形結節影，不能排除早期肺癌的可能。因此，臨床醫生需要準確地描述肺結節，特別是那些有惡性可能的結節。臨床醫生可以根據結節性質制定合適的治療計畫，繼續觀察或明確診斷及治療。根據定義，肺結節不伴有肺門及縱隔淋巴結腫大、肺不張或肺炎等其他疾病。

2005和2009年分別獲得上海市優秀發明選拔賽一等獎和金獎（第1完成人）；以及“國家醫藥衛生科技進步三等獎”兩次和其它多項獎勵。
RESULTS:
Evaluation of pulmonary nodules in Asia broadly follows those of the CHEST guidelines with important caveats. Practitioners should be aware of the risk of lung cancer caused by high levels of indoor and outdoor air pollution, as well as the high incidence of adenocarcinoma in female nonsmokers. Furthermore, the high prevalence of granulomatous disease and other infectious causes of pulmonary nodules need to be considered. Therefore, diagnostic risk calculators developed in non-Asian patients may not be applicable. Overall, longer surveillance of nodules than those recommended by CHEST should be considered.

CONCLUSIONS:
TB in Asia favors lesser reliance on PET scanning and greater use of nonsurgical biopsy over surgical diagnosis or surveillance. Practitioners in Asia are encouraged to use these adapted consensus guidelines to facilitate consistent evaluation of pulmonary nodules.
Future trend of thoracic cancer surgery  Prof. Mark K. Ferguson

Mark K. Ferguson, M.D.

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5841 S. Maryland Avenue, MC 5040
Chicago, IL 60637
United States

Background

Professor of Surgery, Section of Cardiac and Thoracic Surgery, University of Chicago
University of Chicago Comprehensive Cancer Center
Director, ACGME Residency in Cardiothoracic Surgery

Interests

Lung cancer
Esophageal cancer
Thymic diseases
Hyperhidrosis
Barrett's esophagus
Achalasia
Hiatal hernia
Thoracoscopy, laparoscopy
Robotic surgery

Research

Predictive modeling of outcomes

Education

Simulation

Decision analysis and cost-effectiveness
Education

Harvard College (B.A. 1973)
University of Chicago (M.D. 1977)
Resident in General Surgery, University of Chicago (1977-1982)
Fellow in Cardiothoracic Surgery, University of Chicago (1982-1984)
MERITS Fellowship in Education (2012)

Dr. Ferguson specializes in the surgical management of diseases of the lungs, esophagus and thymus. He is experienced in all techniques of lung and esophageal resection, and is skilled in surgical methods to relieve airway obstruction and malignant pleural effusions. He has served on the boards and committees of numerous national societies and institutions including the Food and Drug Administration (FDA) and the National Institutes of Health (NIH). Dr. Ferguson is the author of more than 85 chapters in medical textbooks. He has edited or written books on esophageal reconstructive surgery, failed anti-reflux therapy, and decision-making in thoracic surgery that has been published in four languages. He authored an atlas of general thoracic surgery. Dr. Ferguson has also written more than 250 papers or abstracts in medical journals, serves as deputy editor for a cardiothoracic surgery journal, and is on the board of three other journals. His research interests include risk analysis, long-term outcomes after lung resection and esophageal resection, development of simulation methods for surgical training, and advanced techniques in surgical education.

Memberships

American Association for Thoracic Surgery
American Surgical Association
European Association for Cardio-Thoracic Surgery
General Thoracic Surgery Club
Society of Thoracic Surgeons
International Society for Diseases of the Esophagus

Surgical techniques remain central to the diagnosis and staging of lung cancer. Clinical situations which invoke the role of surgery include the diagnosis of solitary pulmonary masses, staging of the mediastinum, restaging of the mediastinum and the assessment of resectability. The techniques available include cervical mediastinoscopy, anterior mediastinotomy, video-assisted thoracoscopy and different procedures for intra-operative mediastinal lymph node assessment including systematic nodal dissection, lobe-specific nodal dissection and sentinel node mapping. The staging of lung cancer is continuously evolving as technological advances combine with clinical advances to better stratify patients into treatment and prognostic categories and alter pre-operative investigation algorithms. Although most of the surgical techniques have been around for many years, it is their application in
future which is likely to change. The increasing use of positron emission tomography/computed tomography fusion imaging is raising the proportion of patients being shown to have additional lesions that could contraindicate surgical treatment but which require tissue confirmation to exclude a false-positive examination. Many such lesions are amenable to the expanding techniques available to the interventional endoscopist. The relationship between the surgeon and the endoscopist must become closer to ensure that the appropriate technique is used at each point in the patient's pathway. The future of surgical techniques will be driven by: (1) developments in screening and imaging, with a likelihood that more early stage cancers will present and may be amenable to minimally invasive surgical approaches with the possibility of a role for robotics and nanotechnology; (2) improvements in neoadjuvant therapies which will demand flawless mediastinal staging and restaging; (3) advances in molecular biology which, whilst currently requiring that surgery provide samples of tumour and lymph node tissue to fully characterize the disease, do hold the promise that ever smaller amounts of tissue will be required and that eventually the genetic fingerprint will provide a biological ultrastaging to perhaps supersede anatomical staging.
Role of SBRT & Proton therapy on precision treatment of lung cancer
Zhongxing Liao 廖仲星

Zhongxing Liao, M.D.

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Bio Statement
My research interests focus on improving the therapeutic ratio of radiation therapy for thoracic malignancies through translational research. More specifically, I am seeking to improve the efficacy and reduce the toxicity of chemoradiation therapy for lung and esophageal cancers by using molecular targeting strategies; by using advanced radiation delivery technologies; by generating and using models for predicting risks of normal tissue...
toxicity; by reducing that toxicity with adaptive modification of radiation parameters based on biomarkers such as SNPs and serum levels of inflammatory cytokines, by reducing the symptom burden and improving patients quality of life using integrative medicine, and ultimately, by developing strategies to practice highly personalized treatments.

Abstract:
Radiotherapy plays important role in precision medicine in cancer treatment. SBRT and proton therapy are two examples of precision radiotherapy technologies that has a potential to shift the paradigm of radiation treatment for cancer patients. The current status of SBRT and proton treatment for lung cancer patient will be reviewed. The challenges and directions will be discussed.

Immunotherapy in Lung Cancer Treatment Cheng-Ta Yang 楊政達
Immunotherapy is the use of medicines to stimulate a person’s own immune system to recognize and destroy cancer cells more effectively. Immunotherapy can be used to treat some forms of non-small cell lung cancer (NSCLC).

An important part of the immune system is its ability to keep itself from attacking normal cells in the body. To do this, it uses “checkpoints” – molecules on immune cells that need to be turned on (or off) to start an immune response. Cancer cells sometimes use these checkpoints to avoid being attacked by the immune system. But newer drugs that target these checkpoints hold a lot of promise as cancer treatments.

Nivolumab (Opdivo) and pembrolizumab (Keytruda) target PD-1, a protein on immune system cells called T cells that normally helps keep these cells from attacking other cells in the body. By blocking PD-1, these drugs boost the immune response against cancer cells. This can shrink some tumors or slow their growth.

Atezolizumab (Tecentriq) targets PD-L1, a protein related to PD-1 that is found on some tumor cells and immune cells. Blocking this protein can also help boost the immune response against cancer cells. These drugs can be used in people with certain types of NSCLC whose cancer starts growing again after chemotherapy or other drug treatments. Pembrolizumab can also be used as the first treatment (instead of chemo or other drugs) in some people.

These drugs are given as an intravenous (IV) infusion every 2 or 3 weeks.

Side effects of these drugs can include fatigue, cough, nausea, itching, skin rash, loss of appetite, constipation, joint pain, and diarrhea.

Other, more serious side effects occur less often. These drugs work by basically removing the brakes on the body’s immune system. Sometimes the immune system starts attacking other parts of the body, which can cause serious or even life-threatening problems in the lungs, intestines, liver, hormone-making glands, kidneys, or other organs.

It’s very important to report any new side effects to your health care team promptly. If serious side effects do occur, treatment may need to be stopped and you may get high doses of corticosteroids to suppress your immune system.
Hospital Investment and Financing: International Perspective of Mainland China

林楊林 (新里程醫院集團首席執行官)

林楊林先生，現任新里程醫院集團董事、首席執行官，全面負責新里程醫院集團戰略制定、業務經營及資本規劃。新里程醫院集團旗下業務涉及醫院運營、醫生集團、醫療資料和跨境醫療等，林先生擁有豐富的產業投資及經營管理經驗。

林楊林先生曾任北大醫療產業基金首席執行官，負責北大醫療產業基金的創立、募資、投資與管理，並作為投資決策委員會核心成員參與基金重大投資決策。基金總規模超過50億元人民幣，形成了以醫院投資為核心、多種醫療服務並存的投資組合。

加入北大醫療產業基金之前，林先生曾任職於澳大利亞與紐西蘭銀行集團(以下簡稱“澳新銀行”)，期間推動了大型國有企業超過100億美元的跨境投資與並購業務。

林先生職業生涯開始於滙豐銀行北京分行，負責為北方區企業客戶提供多種形式的公司融資。林先生擁有對外經濟貿易大學經濟學學士、國際金融學碩士學位。

新里程醫院集團 (New Journey Hospital Group)

新里程醫院集團有限公司(以下簡稱“新里程醫院集團”)是由中信產業基金控股、以腫瘤學科為特色的開放式醫療集團，以醫院為產業入口，涵蓋醫院運營、醫生集團、醫療數據、跨境醫療等業務，向患者提供全里程健康解決方案。

新里程醫院集團以控股投資醫院為合作平臺，打造中央診療中心、區域診療中心及國際診療中心；對合作醫院提供系統性提升及持續性創新的投後管理解決方案，包括但不限於醫療資源、學科建設、醫院管理、品牌、資金、技術、人才等方面給予全面支持。

新里程醫院集團遵循“患者至上、醫者受益”的理念，致力於建立一家令人尊敬的醫療機構，努力打造一個商業價值與社會價值相統一的醫療集團。
新里程美家国际医疗
NJ MEGA INTERNATIONAL

新里程美家国际医疗（简称“新里程美家”）是中信产业基金控股的新里程医院集团的国际医疗平台。依托新里程医院集团旗下的北京新里程肿瘤医院、北京新里程肿瘤医院、北京新里程肿瘤医院、北京新里程肿瘤医院等区域医疗中心的全国医院布局，新里程美家以肿瘤学科为主要诊疗方向，与美国、德国、英国、日本、台湾等知名医疗机构及权威专家建立国际诊疗绿色渠道，致力于实现“中国患者、全球治疗”的愿景。

新里程美家作为国内唯一一家大型医院集团的国际平台，以早期预防为基础，以制定个性化诊疗方案为核心，提供海外体检、肿瘤筛查、远程会诊、疑难病特诊、绿色通道等服务。新里程美家的国际医疗服务，同时与驻国内医院网络相呼应，提供海外诊疗方案的国内落地治疗及服务，实现跨地诊疗一站式解决。

新里程美家秉承医疗无国界的理念，努力推动国内外专家及医疗机构的临床交流与战略合作，为患者提供全球领先的诊疗方案，为医者提供疑难杂症的国际合作。

我们的优势

依托实体医疗机构的国际诊疗中心

新里程美家依托国内实体医院的资源优势，将国内外专家资源通过远程医疗会诊，获得诊疗方案的建议，也有利于患者的后续治疗及跟踪。国内医生可观察患者的远期及近期治疗效果，并结合海外专家第二诊疗意见对治疗方案做出调整，巩固患者治疗效果，并对患者后续的康复治疗进行多维度支持。

集学术与临床、培训与进修为一体的国际医疗平台

新里程美家为国内医院的国际医疗建立了全新模式，从国际学术交流与合作、远程教育与培训、海外进修与访问、远程疑难病例会诊等各个方面，构建起全球医院和医生双向循环的国际合作平台。

多学科诊疗(MDT)为特色的全球解决方案

新里程美家以欧美多学科诊疗(MDT)为特色，为国内患者提供涵盖肺癌、乳腺癌、肝癌等肿瘤，心脑血管等重大疾病等各类疾病，形成从多学科诊断到多手段治疗的全球医疗解决方案，为患者提供全方位、周到的服务。

中国患者 全球诊疗
MD Anderson Cancer Center Global Academic Programs

Ta-Jen Liu (劉達仁) Ph.D

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PROFESSIONAL MEMBERSHIPS/ACTIVITIES: Society Memberships:
American Association for Cancer Research, 1999-present
American Society of Gene Therapy, 1999-present
American Society of Neuro-Oncology, 1998-present.

Summary:
MD Anderson’s mission statement says we work to “eliminate cancer in Texas, the nation, and the world,” and a key strategy is international collaboration. The job is just too big for one institution or even one country. There are four missions focusing on: 1) patient care, 2) research, 3) education, and 4) prevention.

One way that MD Anderson fulfills its mission to have a global impact is to share our expertise directly through faculty presentations at conferences and online; for example, via Professional Oncology Education. Another way is through publication of the results of our research. Our academics have been involved in nearly 21,000 papers over the past six or so years (an average of 10 every day!), and a full third of these involve collaboration with institutions outside the United States.

At the heart of this are MD Anderson’s Sister Institutions, a network of 33 premier academic cancer-fighting institutions from 24 countries around the globe. Our Global Academic Programs (GAP) team supports multifaceted relationships with them on behalf of our faculty. All mission areas are included, with an emphasis on bidirectional learning and research. Cancer is not the same everywhere, either in its biology or its presentation, and we need to coordinate our resources and know-how to make an impact.

GAP’s seed fund program has initiated more than 100 projects in the past five years. Exciting work is being done in the implementation of existing knowledge in prevention, such as tobacco control. The network has also come together to help resource-challenged countries in Africa train cancer experts.

Much remains to be done, but together we can reach our goal of ending cancer.
Robotic lung cancer resection: Technical Considerations

Jang-Ming Lee 李章銘

Retrospective series indicate that robot-assisted approaches to lung cancer resection offer comparable radicality and safety to video-assisted thoracic surgery or open surgery. More intuitive movements, greater flexibility, and high-definition three-dimensional vision overcome limitations of video-assisted thoracic surgery and may encourage wider adoption of robotic surgery for lung cancer, particularly as more early stage cases are diagnosed by screening. High capital and running costs, limited instrument availability, and long operating times are important disadvantages. Entry of competitor companies should drive down costs. Studies are required to assess quality of life, morbidity, oncologic radicality, and cost effectiveness.
Intubated general anesthesia with single-lung ventilation has been considered mandatory for thoracoscopic lobectomy for nonsmall cell lung cancer. Few reports of thoracoscopic lobectomy without tracheal intubation are published, using either thoracic epidural anesthesia (TEA) or intercostal blockade. The comparisons of perioperative outcomes of nonintubated thoracoscopic lobectomy using epidural anesthesia and intercostal blockade are not reported previously. From September 2009 to August 2014, a total of 238 patients with lung cancer who underwent nonintubated thoracoscopic lobectomy were recruited from our prospectively maintained database of all patients undergoing nonintubated thoracoscopic surgery using TEA or intercostal blockade. A multiple regression analysis, adjusting for preoperative variables, was performed to compare the perioperative outcomes of the 2 anesthesia methods. Overall,
130 patients underwent nonintubated thoracoscopic lobectomy using epidural anesthesia whereas 108 had intercostal blockade. The 2 groups were similar in demographic data, except for sex, preoperative lung function, physical status classification, and history of smoking. After adjustment for the preoperative variables, nonintubated thoracoscopic lobectomy using intercostal blockade was associated with shorter durations of anesthetic induction and surgery (P<0.001). Furthermore, hemodynamics were more stable with less use of vasoactive drugs (odds ratio: 0.53; 95% confidence interval [CI], 0.27 to 1.04; P=0.064) and less blood loss (mean difference: -55.2mL; 95% CI, -93 to -17.3; P=0.004). Postoperatively, the 2 groups had comparable incidences of complications. Patients in the intercostal blockade group had a shorter average duration of chest tube drainage (P=0.064) but a similar average length of hospital stay (P=0.569). Conversion to tracheal intubation was required in 13 patients (5.5%), and no in-hospital mortality occurred in either group. Nonintubated thoracoscopic lobectomy using either epidural anesthesia or intercostal blockade is feasible and safe. Intercostal blockade is a simpler alternative to epidural anesthesia for nonintubated thoracoscopic lobectomy in selected patients with lung cancer.

Anesthesia technique for Nonintubated thoracic surgery

Ya-Jung Cheng 鄭雅蓉

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Since the introduction of video-assisted thoracoscopic surgery (VATS), it has become a preferred alternative to treat patients with thoracic diseases. For decades, intubated general anesthesia with one-lung ventilation has been considered mandatory during VATS. However, complications and adverse effects following tracheal intubation and one-lung ventilation are inevitable, including intubation-related airway trauma, ventilation-induced lung injury, residual neuromuscular blockade, impaired cardiac performance, and postoperative nausea and vomiting. To reduce the adverse effects of tracheal intubation and general anesthesia, thoracoscopic surgery without tracheal intubation has been recently employed for...
management of pneumothorax, resection of pulmonary nodules, resection of solitary metastases, lung volume reduction surgery, lobectomy, and segmentectomy. The results achieved for these early surgeries are encouraging. Although the feasibility of thoracoscopic surgery via nonintubated anesthesia was demonstrated in some reports, most of them are limited to small number of cases. In this study, we reported our experience of 446 consecutive patients undergoing nonintubated VATS in a 4-year period of time to evaluate the feasibility, safety, and indication of this innovative technique in a tertiary medical center in Taiwan. The anesthesia and surgical techniques were also described.

**Precision Surgical therapy for Locally Advanced Non-small Cell Lung Cancer Based on Molecular Staging**  
**QinHua Zhou**


Precision medicine is altering the traditional role of the surgical pathologist in caring for patients with lung cancer. Diagnosing specific cell type is now a foundation for selecting lung cancers for predictive-biomarker testing by molecular techniques. Using conventional techniques and familiar equipment, the surgical pathologist's role goes beyond this important step and will include screening for, and possibly diagnosis of, predictive biomarkers as we illustrate for one predictive biomarker. Pathologists should embrace the innovations described at the Houston Lung Symposium but must recognize that their traditional expertise will be an important component of precision medicine for the foreseeable future.
ctDNA detection in early stage non-small cell lung cancer

Kezhong Chen 陳克終

Noninvasive liquid biopsies of circulating tumor DNA (ctDNA) is a promising approach for non-small cell lung cancer (NSCLC) patients. Most previous studies on ctDNA have focused on advanced stage and metastatic cancers with a limited number of genes. Whether liquid biopsy of ctDNA is applicable for early or locally advanced stage, resectable NSCLC is unclear.

We evaluated the feasibility of identifying ctDNA in the serum of surgical NSCLC patients with matched tumor tissue by targeted sequencing. NSCLC patients who underwent surgery were enrolled prospectively. Targeted DNA sequencing with a next-generation sequencing (NGS) platform was used to identify a series of driver somatic mutations in matched tumor DNA (tDNA) and plasma ctDNA samples with matched white blood cell (WBC) DNA as controls.

The result showed ctDNA analysis in early or locally advanced stage surgical patients via targeted DNA sequencing is feasible and offers better prediction than tumor markers. This method may be useful for early diagnostic screening and assist with clinical decision-making for treating NSCLC.
Molecular profilling of adjuvant target therapy in NSCLC  Chin Chou Wang 王金洲

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Research Interest:
肺部腫瘤, 呼吸道疾病, 肺部感染疾病, 肺部職業疾病, 重症醫學

Molecular profiling of adjuvant target therapy in NSCLC
The search for innovative therapeutic agents in non-small cell lung cancer (NSCLC) has witnessed a swift evolution. The number of targeted drugs that can improve patient outcomes with an acceptable safety profile is steadily increasing. In this review, we highlight current drugs that have already been approved or are under evaluation for the treatment of patients with NSCLC, either in monotherapy or combined therapy for both the first- and second-line settings. Experience with drugs targeting the vascular endothelial growth factor and its receptor, as well as the epidermal growth factor receptor is summarized. Moreover, we provide an overview of more novel targets in NSCLC and initial experience with the respective therapeutic agents.
架構與介面，也為長庚大學分子醫學研究中心發展出一套搜尋及評估生物標誌文獻的系統，並與多個長庚醫院腫瘤科合作，利用次世代定序數據研發出以突變基因作為癌症病患預後評估的分子生物標誌。陳淑貞博士具多年癌症藥物開發、次世代定序運作、次世代定序核心實驗室管理，以及大規模次世代定序數據分析的經驗，並擅於藉由連結定序結果與生物資料庫，將定序數據轉換為具生物學和臨床意義的報告。陳博士擔任行動基因技術長，負責開發核心定序技術標準作業流程、規劃所有相關運作設施、設計資料分析流程、管理資料儲存系統、負責規劃並執行與公司業務相關的科技發表會和研討會。

**Mutation spectrum of NSCLC in Taiwan and its clinical implications**

**ShiuFeng Hwang 黃秀芬**

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Cancer is now known as a disease of genomic alterations. Mutational analysis and genomics profiling in recent years have advanced the field of lung cancer genetics/genomics significantly. It is becoming more accepted now that the identification of genomic alterations in lung cancer can impact therapeutics, especially when the alterations represent “oncogenic drivers” in the processes of tumorigenesis and progression. In this review, we will highlight the key driver oncogenic gene mutations and fusions identified in lung cancer. The review will summarize and report the available demographic and clinicopathological data as well as molecular details behind various lung cancer gene alterations in the context of race. We hope to shed some light into the disparities in the incidence of various genetic mutations among lung cancer patients of different racial backgrounds. As molecularly targeted therapy continues to advance in lung cancer, racial differences in specific genetic/genomic alterations can have an important impact in the choices of therapeutics and in our understanding of the drug sensitivity/resistance profile. The most relevant genes in lung cancer described in this review include the following: EGFR, KRAS, MET, LKB1, BRAF, PIK3CA, ALK, RET, and ROS1. Commonly identified genetic/genomic alterations such as missense or nonsense mutations, small insertions or deletions, alternative splicing, and chromosomal fusion rearrangements were discussed. Relevance in current targeted therapeutic drugs was mentioned when appropriate. We also highlighted various targeted therapeutics that are currently under clinical development, such as the MET inhibitors and antibodies. With the advent of next-generation sequencing, the landscape of genomic alterations in lung cancer is expected to be much transformed and detailed in upcoming years. These genomic landscape differences in the context of racial disparities should be emphasized both in tumorigenesis and in drug sensitivity/resistance. It is hoped that such effort will help to diminish racial disparities in lung cancer outcome in the future.

**Immunohistology technique for Lung cancer Immunotherapy**

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經歷
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2002~2010 高雄長庚醫院解剖病理科主任
1998~1999 長庚護專講師
1998~2002 輔英技術學院講師
2003~2007 長庚大學助理教授
2007~2015 長庚大學專任副教授
2015.08 ~迄今 長庚大學專任教授

Tumor markers are molecules whose levels are considered as signals, symbols, or representatives of tumor cells, and increased in cancerous conditions. Normal cells express most of the tumor markers like tumor cells. By present, most tumor markers are found to be proteins, and some patterns of gene expression and DNA changes are also considered to be tumor markers. More than 20 tumor markers have been developed for clinical use. One kind of cancer is normally featured with one or more tumor markers. According to immunohistochemistry (IHC) visualized tumor markers such as enzymes, oncogenes, tumor-specific antigens, tumor suppressor genes and tumor proliferation markers, doctors can efficiently predict oncogenesis and diagnose a cancer as benign or malignant, determine the stage and the grade of a cancer. Immunohistochemistry represents an important complementary tool for the routine diagnosis of lung cancer and for the identification of the different histological types and prognostic factors. Its purpose is to categorize patients in order to ensure appropriate and specific treatment, as well as to identify tumors at higher risk of recurrence and fatal outcomes. The essential immunohistochemistry panel recommended for the diagnosis and prognosis includes expression of the following markers: CK7; CK20; COX-2; TTF-1, chromogranin; synaptophysin, CD56; PSA; CA125; p53; c-erbB-2; MMP-9; and VEGF.
腹針療法創始人：薄智雲教授

薄智雲教授

薄智雲教授

薄智雲教授 腹針發明人 腹針療法創始人 教授 主任導師

中國著名中醫針灸學家。腹針發明人。腹針療法創始人。首批“中華中醫藥傳承特別貢獻獎”獲得者。

中國“百老”之一，學術經驗繼承人指導老師。中國針灸學會腹針專業委員會主任委員、北京薄氏腹針醫學研究院院長、廣東省中醫院腹針研究所所長、廣西中醫學院客座教授、全歐洲中醫藥專家聯合會學術顧問、美國腹針醫學會高級顧問、世界中醫藥學會聯合會自然療法專業委員會顧問。

從事針灸臨床研究 40 餘年，在針灸學科的諸多領域都有較強的醫、教、研能力，發表和交流論文數十篇，專著《腹針療法》、《腹針掛圖》和科普《腹針無痛治百病》受到大家的追捧。使針灸適應症得到了很大的拓展，腹針被人們稱為“奇效腹針療法”。現在，薄老的學生 3000 余人遍佈全國、港、澳、臺地區以及美國、法國、義大利、新加坡、希臘、韓國、英國、挪威、荷蘭、加拿大等 30 多個國家。腹針療法在神州大地上和世界不同角落開花結果。許多歐洲的患者都把薄教授的手稱為“上帝之手”。這樣一雙神奇的上帝之手正在用他的魔力給世界帶來新的希望。

主要成就

愛好東西方哲學、東西方文化和世界宗教的研究，從事針灸臨床研究 30 多年。在針灸學科的諸多領域都有較強的醫、教、研能力，發表和交流論文 30 餘篇，《腹針療法》專著一本。1972 年受臨床奇效的啟迪開始並經二十餘年的潛心研究創新發明“腹針療法”，豐富了針灸學科的內容，使針灸的適應症得到了很大的拓展。腹針療法以“神闕調控系統”理論為核心，使傳統的臟腑經絡學說得到了更好的闡釋。腹針療法首次提出：經絡分為先天和後天經絡兩個系統，並發現先天經絡的在腹部的分佈特點，不僅能取得神奇的療效，而且能夠重複驗證，使針灸治療慢性病、疑難病的治療的週期大大縮短，被人們稱為“奇效腹針療法”，也為現代經絡研究提出了一條新的思路。
Cross - Straits International Medical Collaborations & Competitions

Two-sides International Medical Collaborations: Competition & Cooperation  HP Liu (劉會平)

Liu, Hui-Ping (劉會平)

Expertise
- Minimally invasive thoracoscopy (lung cancer, oesophagus cancer, mediastinal tumors, thoracic tumors)

Experiences
- President of Xinhui Milestone Cancer Hospital, Beijing
- President of Mingyi Hospital, Nanjing
- Vice President of Chang Gung Memorial Hospital
- Professor of Chang Gung University
- Chief of Cardiothoracic Surgery at LinKou Chang Gung Hospital
- Current Professor of Chang Gung International Lung Cancer Center
- Professor of Chang Gung Memorial Hospital, Taiwan
- Council Member of the Taiwan Association of Cardiothoracic Surgery
- Director of the International Endoscopic Surgical Society

Professor HP Liu started his medical education at medical University Taiwan, where he completed his medical education and was later awarded Doctor of Medicine. He received his training in general surgery and cardiothoracic surgery at Chang Gung Memorial Hospital in Taiwan. He is currently Professor of Chang Gung International Lung Cancer center. Professor Liu has been chief of department of Cardiothoracic Surgery and Vice superintendent in Chang Gung Memorial Hospital, Taiwan. He has been director member of International endoscopic surgical society and council member of Taiwan association of cardiothoracic surgery. He is one of the very few Taiwanese cardiothoracic surgeons who pioneered the development of Video-assisted thoracic surgery (VATS) in Asia and is an internationally well-known expert in VATS. He contributed many book chapters, teaching videos and publications related to VATS surgery in indexed journals. He currently served on more than 15 editorial boards and guest reviewer of international journals and has been invited as visiting professor and live surgery demonstration to many leading academic institutions in the world includes Hongkong, Singapore, Korea, Japan, USA, India, Singapore, Australia, Italy, Brazil, Luxemburg, China,
etc. His clinical practice covers the field of general thoracic surgery in pulmonary and esophageal cancer surgery, minimally invasive thoracic surgery, mediastinal, pleural, lung volume reduction for emphysema and lung transplantation for end-stage lung disease. Professor Liu is also the founder of the International Chinese Society of Thoracic surgery (ICSTS) and an active member of American and European Society of Thoracic Surgeons.

近年來，海峽兩岸在各領域交流日益頻繁，自 2000 年大陸發佈《中外合資合作醫療機構管理暫行辦法》，開放外資（包括台資）以合資方式開設醫院以來，台資企業包括台塑長庚、明基、福特六和、旺旺、潤泰、華泰電子等分別在廈門、南京、杭州、上海、昆山、長沙等地投資醫院。目前，大陸醫療服務市場對臺灣地區的開放程度不斷提高。近年來大陸國家計生委在鼓勵社會資本辦醫的規劃中也允許臺灣醫療服務提供者在大陸可設立獨資醫院,其範圍可擴大到全國地級以上城市。海峽兩岸在醫療領域的合作，不僅保障了兩岸民生，而且在醫療及相關產業的共同發展上有著更廣闊的合作空間。由於兩岸患者同文同種、語言溝通又無障礙，因此兩邊的醫療合作對兩岸病患的照護勢必有更好的提升。但也不可違言，近年來大陸各醫療院所也不斷引進人才，引進新技術及新設備且跟國際交流也越來越頻繁，臺灣各醫療院所針對吸引國際醫療病患部分勢必也將面臨與之競爭的局面。往好方面看，這種醫療技術與設備的競爭對病患而言是有好處的。兩岸醫療水準可因此種良性競爭而讓照護水準不斷提升。

總而言之，兩岸醫療不管合作與競爭對兩岸病人都會帶來好處，我們也樂見兩岸在醫療政策上能夠有更好的溝通，在以病人為中心角度下能夠互相提供更好的政策引導來為兩岸的病人謀福利。
全球首台三类医疗设备——氢氧雾化机

运用氢分子可化学还原毒性自由基的特性，为抗炎抗氧化提供安全及有效的创新手段
（已有国家食品药品监督管理总局认定为第三类医疗器械，且已获得CE IIb类认证认证中）

+ 氢气可特异性中和体内毒性自由基，不影响活性自由基的含量
氢气应激的主流观点认为，大部分与老化相关的健康问题，如皱纹、心脑病和阿尔茨海默症，都与体内活性氧有关。氢气可以中和体内的自由基，能有效缓解这些疾病，这一观点得到了多项研究的支持，证实氢气泡浴可延长小鼠寿命

氢气治疗疾病的主要依据是根据氢气可以中和活性自由基和亚硝酸阴离子等毒性自由基，但不影响生物活性的—氧化氮、过氧化氢和超氧化氮离子等。

氢气是目前已知的唯一具有选择性抗氧化性的物质，而且无毒副作用，还可提高内源性抗氧化活性。

+ 氢气具有抗炎作用

研究发现，氢气可显著降低炎症因子如白细胞介素6，肿瘤坏死因子TNFα等的含量，抑制炎症反应。

氢气通过抗炎作用可以作为治疗病毒性感冒、多器官衰竭、烧伤等多发性疾病的辅助治疗，这说明氢气具有重要的临床意义。

+ 氢气可参与细胞信号转导的调节

结合靶向细胞膜上特异性受体FceRI，抑制下游分子级联反应；
2. 上调NF-κB的活化，抑制炎症反应；
3. 抑制细胞凋亡蛋白caspase-3的表达；
4. 激活相关因子2（Nrf2）表达。

67
在“氢”疗和服用发酵纳米薆同时，搭配使用该酵素，效果更佳！

人体由大约60兆个细胞所构成。这60兆个细胞每一个存活过程中，都会进行60万次
各自不同的化学反应。人体内部无所不在、不断在进行的数不清的化学反应，都必须
有“触媒”才能完成，而所谓的“触媒”，无非就是“酵素”。

人类年龄大了体内先天酵素减少，消化吸收食物与解毒能力弱化，于是免疫力降低，
无法消灭入侵体内细菌，变成容易生病。

所以，三大营养素—碳水、蛋白质与脂肪，是汽车所需要汽油，酵素则等于”电池”。
拼命加油的汽车如果没有电油，还是无法发动，包含人体在内所有生物体内部化学反
应，都需要酵素居间穿梭作用才能成立。

酵素八大功效

- 抗氧化
- 消炎作用
- 净化血液
- 排毒瘦身
- 活化细胞
- 抗菌作用
- 分解转化
- 增强自愈力

酵素营养的定律：
生命的长度与人体消耗酵素的速度成反比，
增加食物中酵素的摄取量，可减少体内酵素的消耗速度，
更重要的是酵素可以排除毒素，
平衡体内酸碱，进而修补细胞，调整体质。

诺贝尔医学奖得主，美国营养学权威大师李奥华.贺威尔
原料取自野生古代紫米稻种，
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半纤维素含量是一般糙米的4倍！
多酚花色素抗氧化力大约是相同重量蔬菜与番茄的5倍！

- 乳清蛋白
  增加代谢、改善血糖，增进免疫系统机能，抗氧化
- γ-氨基丁酸(GABA)
  安定神经、调整血压、改善睡眠障碍
- 花青素
  具有抗老化、改善肩颈酸痛、手脚冰冷、视力疲劳

- 营养分子直接免疫力 防癌抗老新利器
- 将细胞内层营养分离，借天然酵素发酵复合与低分子化所形成
- 易于细胞线粒体直接吸收，根本上解决细胞营养问题，激活NK
  细胞与自体细胞活性
- 按补食中中心化肌、激素所造成的营养元素含量减少问题

前田博士50年潜心研究的心血结晶--SUPER ORYZALOSE EX 发酵抗炎素，以世界罕见的纯种野生古代米之营养多次发酵，高效率激活人体免疫力，20多年获得日本医师信赖，是癌患者超过10万人。

前田清一博士
日本ORIGIN生化学研究所所长／日本医学及农学双博士／Super Oryzalose Ex 开发者

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電話:+886-5-3621000

第一國際會議廳 CGMH Hall I
大會秘書處：
嘉義長庚紀念醫院
Secretariat: Ms Carol Lin (林雅惠)
Email: yhcarol@cgmh.org.tw
嘉義長庚醫院 胸心外科
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交通位置

自行開車:

南下：

1. 水上交流道下（往樸子）→ 168 縣道往西（約 15 分抵達）

2. 82 東西向快速道路往西 → 嘉義縣政府交流道下（約 10 分抵達）

北上：

1. 82 東西向快速道路往西 → 嘉義縣政府交流道下（約 10 分抵達）

2. 82 東西向快速道路往西 → 嘉義縣政府交流道下（約 10 分抵達）

高鐵免費 BRT：頭班車 06：00（約 20 分鐘一車次）（約 10 分抵達）

計程車：跳表約 180 元（約 10 分抵達）
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Thanks to all the participants & faculty members!

Looking forward to meet again!

感謝所有與參與的貴賓專家!

期待再相會!