



TAIPEI VETERANS GENERAL HOSPITAL
台北榮民總醫院

The top-notch medical center of Taiwan

Nov. 2023

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臺北榮民總醫院

Taipei Veterans General Hospital

視病猶親，追求卓越



TABLE OF CONTENT

01

General Introduction

02

Outstanding Medical Practices

03

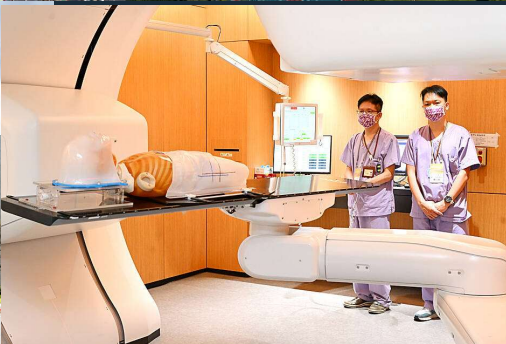
Spotlights

04

Partnership with Vietnam



1. General Introduction



General Introduction (石牌榮總)

- A national first-class medical center in Taiwan
- Established in 1958
- Located in the capital city of Taipei
- Leading expertise in complicated surgeries and cancer treatment techniques
- Designated by Taiwan Ministry of Health & Welfare to develop medical partnership with Vietnam (新南向一國一中心)



臺北榮民總醫院
Taipei Veterans General Hospital



15th Taipei Veterans General Hospital

Starting off our list of the top hospitals in the world is the Taipei Veterans General Hospital, located in Taipei City. Founded in 1958 and funded as well as run by the Veteran's Administration of Taipei, this 3,000 bed facility as well as two sister facilities are used as teaching hospitals and provide state of the art health care to their patients. With consistently high care quality and a remarkably good prognostic track record, this hospital can also claim the first use of the Gamma Knife treatment and first Neurological department within the country, as well as their infectious disease department being the first to isolate the HIV/AIDS virus in Asia.

2016: Ranked **15th** in
“Top hospitals in the world”

by *Gazette Review*



2. Outstanding **Medical Practices**



**Cardiac Arrhythmia
Team**
(心律不整)

- **Been invited to demonstrate complex atrial fibrillation ablation for 40 patients over 12 countries and provides technological support to these countries' medical institutes for AF treatment.**
- **Over 200 international doctors from Asia Pacific, the USA and Europe came to Taipei VGH to learn the AF ablation skills and techniques.**
- **Higher AF ablation long-term successful rate than many internationally well-known medical centers.**
- **Procedure-related complication rate is lower than published international registry data.**



- Treated over 500 cases of high-grade osteosarcoma, thousands of malignant bone tumors and soft tissue sarcoma – Accounting for more than 60% of musculoskeletal tumor patients in Taiwan

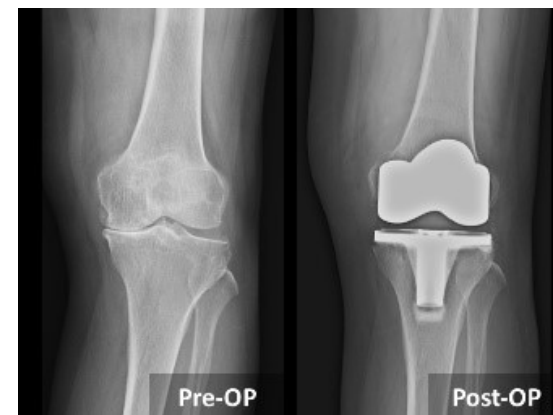
**Musculoskeletal
Team**
(骨肉瘤)





- Perform knee and hip arthroplasty surgery in less than 50 minutes
- Experience in performing difficult primary arthroplasty surgeries
- 3D-printing technique

Joint
Reconstruction
Team
(關節置換)





Liver and Kidney Transplantation (肝腎移植)

- Performed 700 cases of Liver Transplantation (around 550 LDLT and 150 DDLT) and 600 cases of Kidney Transplantation (around 400 LDKT and 200 DDKT). Around 50-60 LT and 30-40 KT per year.
- Liver transplantation record for the lightest patient's body weight of 3.86kg (2019 in Taiwan)
- Liver transplantation record for the youngest patient of 25-day-old (2019 in Taiwan)
- Domino LT. APOLT (auxiliary partial orthotopic liver transplantation) - The only case in Taiwan
- Assisted 14 cases of pediatric LT in Vietnam from 2007 to 2022.
- Arranged 2 urgent liver transplantations for infants from Vietnam under COVID-19 during 2020 to 2021



Pancreas Transplantation (胰臟移植)

- Performed **89.4%** (126/141) cases of pancreas transplant in Taiwan.
- Technical success rate of pancreas transplant is **96%**.
- 1-year pancreas graft survival rate is 98%, better than 83% in U.S.A., 97% in Korea and 85% in Japan;
- 5-year pancreas graft survival rate is 89%, better than 69% in U.S.A., 77% in Korea and 70% in Japan;
- 10-year pancreas graft survival rate is 68%, better than 49% in U.S.A.

Robotic Pancreaticoduodenectomy



Wounds by traditional open pancreaticoduodenectomy

Wounds by robotic pancreaticoduodenectomy

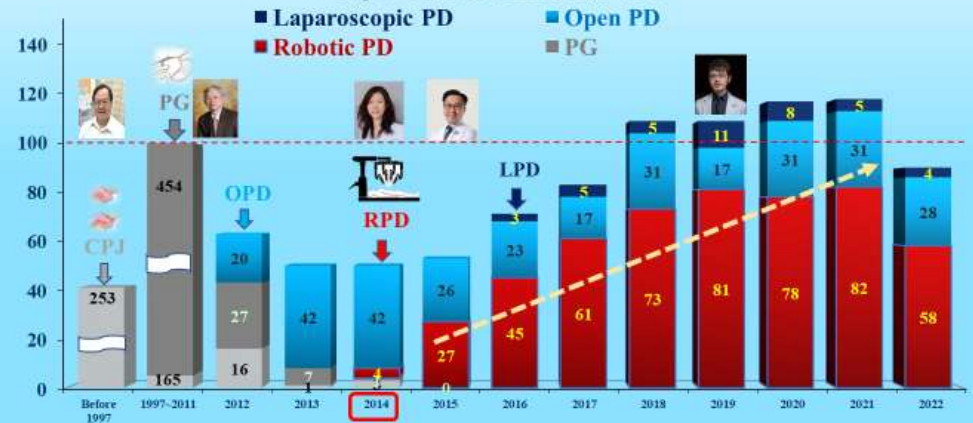
Minimally Invasive
Robotic Pancreatic Surgery
(機器人手臂胰臟手術)

- 1956: Open Pancreaticoduodenectomy
- 2014: Robotic Pancreaticoduodenectomy
- 2016: Laparoscopic Pancreaticoduodenectomy
- Performed over 1,500 Whipple operations (100 cases annually), with minimal invasive procedures (most robotic) in 70% cases



Pancreaticoduodenectomy

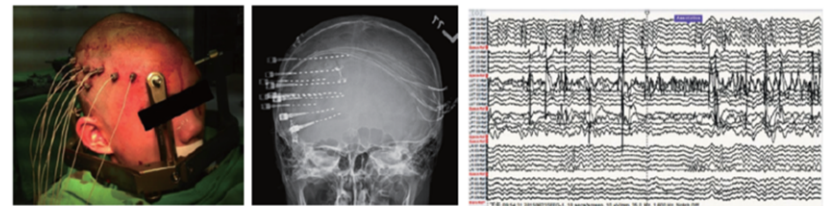
Taipei VGH, 1965~2022-10-17, n = 1787





Epilepsy Surgery Team (癲癇手術)

- Top post-operation outcomes in the world.
- The first-established epilepsy surgery team with the largest number of patients receiving epilepsy surgeries in Taiwan.
- Broadest scale of professions including neurosurgery, neurology, brain imaging and neurophysiological monitor.
- Various epilepsy surgeries including resection surgery, disconnection surgery, radiosurgery and neuromodulation therapy.
- Employ the most advanced technology and facilities to optimize the surgery result.



Stereotactic EEG



Renal Anemia
Team
(腎衰竭團隊)

- We recommended that iron supplementation should be considered when a ferritin <300 ng/mL and/or TSAT $<30\%$ in dialysis patients and to maintain a ferritin level of 300-500 ng/mL, TSAT of 30-50%, and hemoglobin of 10-11 g/dL. The consensus was based on several previous studies of Professor Tarng's team. The recommendation was proposed years ahead the current major CKD guidelines.
- Lower prevalence of iron deficiency and the higher rate of hemoglobin concentration in optimal range than many internationally well-known centers. Moreover, mortality rate in our center is the lowest among published international data.
- 32 international doctors from China, Asia Pacific, US, Europe and Australia were trained by Professor Tarng on clinical practices of renal anemia management.



**Oral/Head
& Neck Cancer
Team**

(口腔及頭頸癌團隊)

- We have produced around 1500 SCI articles covering advanced frontier research in oral carcinogenesis, stem cells & tissue engineering in the best-in-class journals.
- About 3000 oral/head& neck cancer cases had received the comprehensive surgical or nonsurgical tracks of treatment in Taipei-VGH in the past 10 years.



- Unique T-branched Aortic Endograft Technique in Asia
- Tailor-made Aortic Arch Fenestration Technology
- Tailor-made Internal Iliac Artery Fenestration Stent Graft Technology

Mini-Invasive
Endovascular
Repair Team
(血管微創手術)

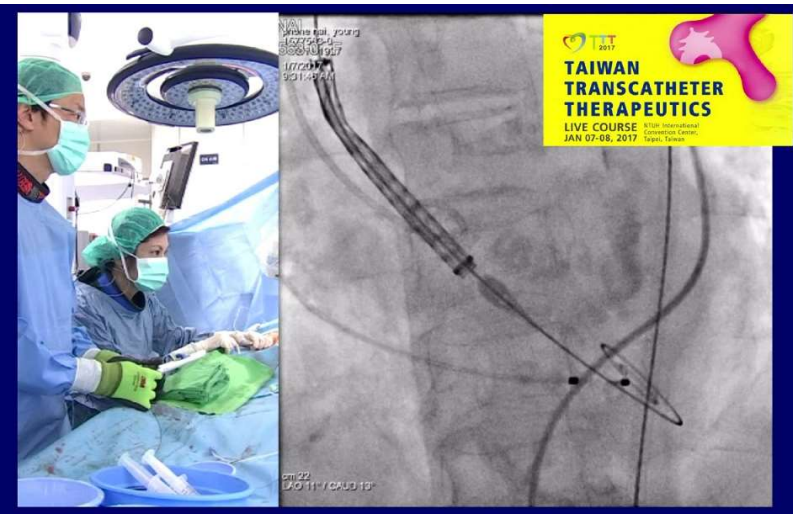









- The first hospital to introduce RFA treatment in Taiwan (2000). Over 350 RFA procedures were performed every year, with more than 20 (SCI) research papers published so far.
- The first hospital to introduce next-generation MWA treatment in Taiwan in 2018.
- Training center for RFA and MWA in Taiwan and Asia.

Radiofrequency
Ablation (RFA) and
Microwave Ablation
(MWA)
(肝癌燒灼治療)

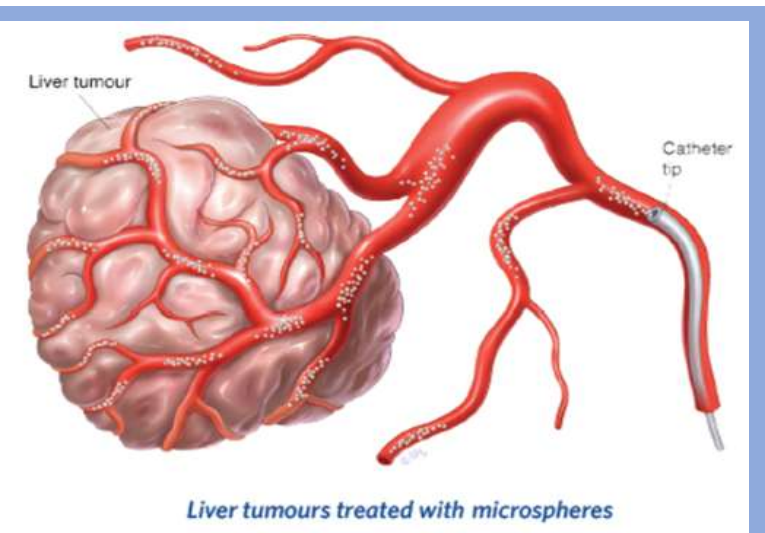




Transcatheter
Aortic Valve
Implantation Team
(微創導管
心臟瓣膜置換術)

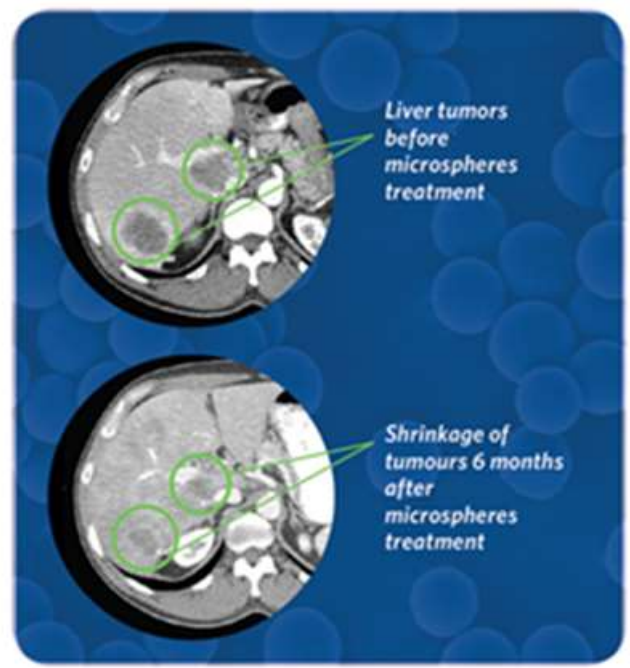
	 Taipei VGH(n=138)	 ADVANCE ¹ (n=1015)	 CoreValve US Trial Extreme Surgical Risk ² (n=489)	 TVT ³ (n=26414)	 GARY ⁴ (n=15964)
EuroSCORE-predicted mortality (%)	20.2	19.3	22.6	-	18.3
Major vascular complication (%)	3.6	10.9	8.2	4.9	4.1
Stroke (%)	1.4	3.0	4.0	2.1	1.5
Paravalvular leak (%)	2.2	16.2	10.5	5.1	5.8
Permanent pacemaker (%)	3.7	26.3	21.6	10.0	17.5
30-day mortality (%)	5.1	4.5	8.4	4.9 (in-hospital)	5.2
1-yr mortality (%)	14.0	18.4	24.3	23.7	24.3



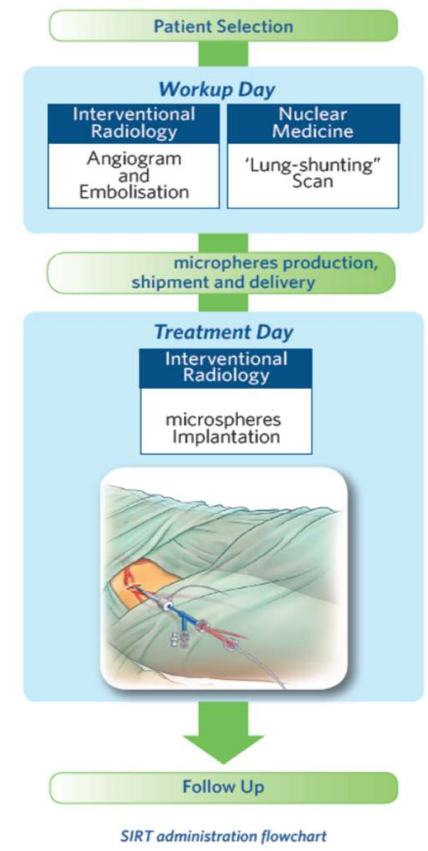


- Treated over 550 cases with liver cancer or colon cancer.
- One of the most experienced Y-90 centers in Asia, with many foreign institutes having visited our hospital to learn and exchange the experiences.

Selective Internal Radiation Therapy (Yttrium-90)
(鈮-90肝癌輻射栓塞)



Shrinkage of tumours after 6 months





- The first subspecialty division in Taiwan since 1959
- 1991: First single lung transplantation in Asia
- 2007: VATS for lung cancer
- Since 2010, CCRT before esophagectomy was introduced
- Most cases (except very early stage) of esophageal cancer received neoadjuvant CCRT before esophagectomy since 2012.

Chest Surgery (胸腔手術)



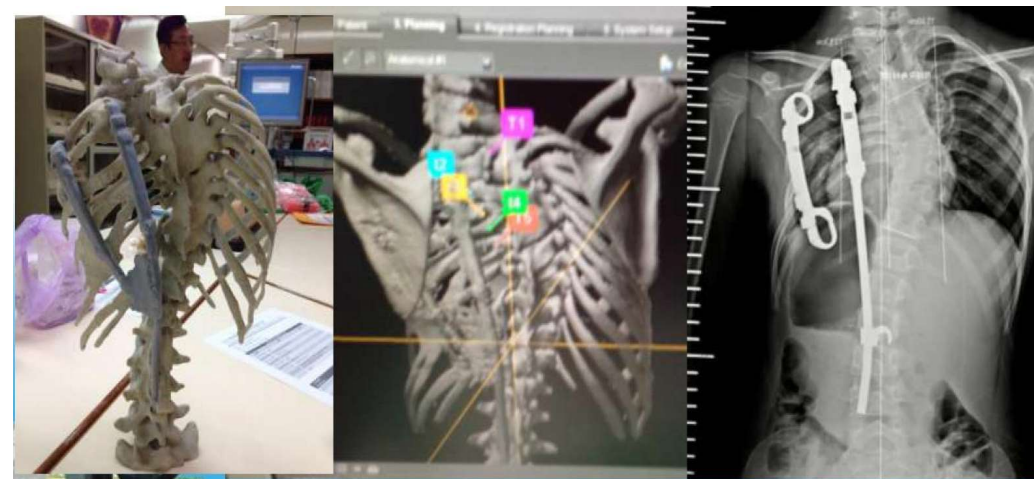
CT and
bronchoscopic
guide
Thoracoscopic
lung resection



- Epidemiological studies in chronic daily headache in adolescents.
- Reversible cerebral vasoconstriction syndromes (thunderclap headaches).
- Heavily T2-weighted magnetic resonance myelography in spontaneous intracranial hypotension (low-pressure headaches).

Headache
Medical Team
(頭痛團隊)





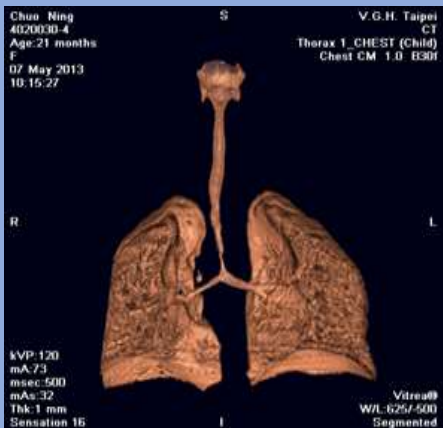
**Surgery for
deformity of spine
(脊椎畸形手術)**





Includes different professionals, including pediatric surgeons, anesthesiologist, intensive care specialists, neonatologists, pulmonologists, radiologists, and cardiovascular surgeons.

The aim of the program was to provide multidisciplinary patients, at any time, with intensive care, radiological investigations, diagnostic and intervention bronchoscopy, reconstructive surgery, ECMO or cardiopulmonary bypass.



Pediatric Tracheal Disorder Team (兒童氣管狹窄團隊)





**Gamma Knife
Radiosurgery
(加馬刀手術)**

- At TVGH, we used GKS to treat over 8,000 patients with various intracranial lesions.
- The series consists of 16% AVMs, 7% dural AV fistulas, 5% cavernous hemangioma, 43% benign tumors, 20% metastatic tumors and other malignant tumors, 3% gliomas, and 6% trigeminal neuralgias.



da Vinci Xi system ↵



da Vinci Si system

- 2009
Introduce the newest Si da Vinci Robotic and performed radical prostatectomy and partial nephrectomy

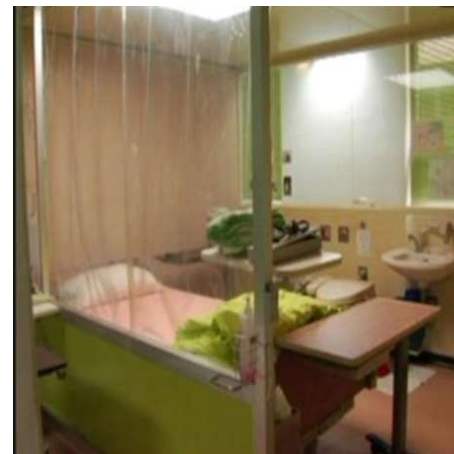
Robotic Surgery for Urology (機器人手臂泌尿系統手術)





- Since 1984, hematopoietic stem cell transplantation has been used to treat patients at Taipei Veterans General Hospital. Over 1600 patients have undergone the procedure.

**Hematopoietic
Stem Cell
Transplantation**
(血液幹細胞移植)





3. Spotlights

COMPREHENSIVE PRECISION MEDICINE OF **ONCOLOGY** TREATMENTS (腫瘤精準治療)

Heavy Ion Therapy



Selective Internal Radiation Therapy (Yttrium-90)



Limb Salvage Surgery for Bone Sarcoma (Biological Reconstruction)



Liver and Kidney Transplantation



BNCT




Hematopoietic Stem Cell Transplantation



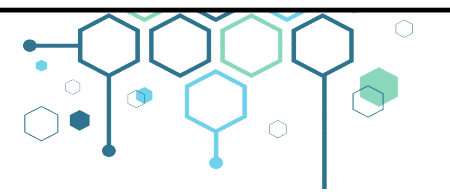


HEAVY-ION CANCER THERAPY CENTER
THE ONLY FACILITY IN TAIWAN

(重粒子治療)



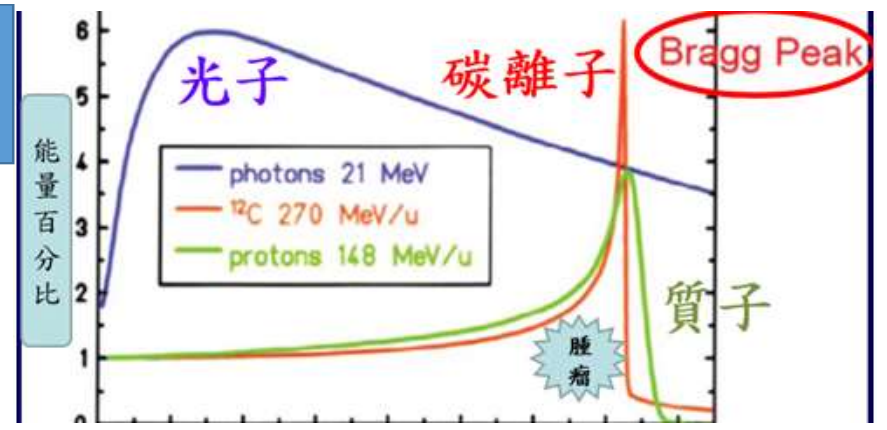
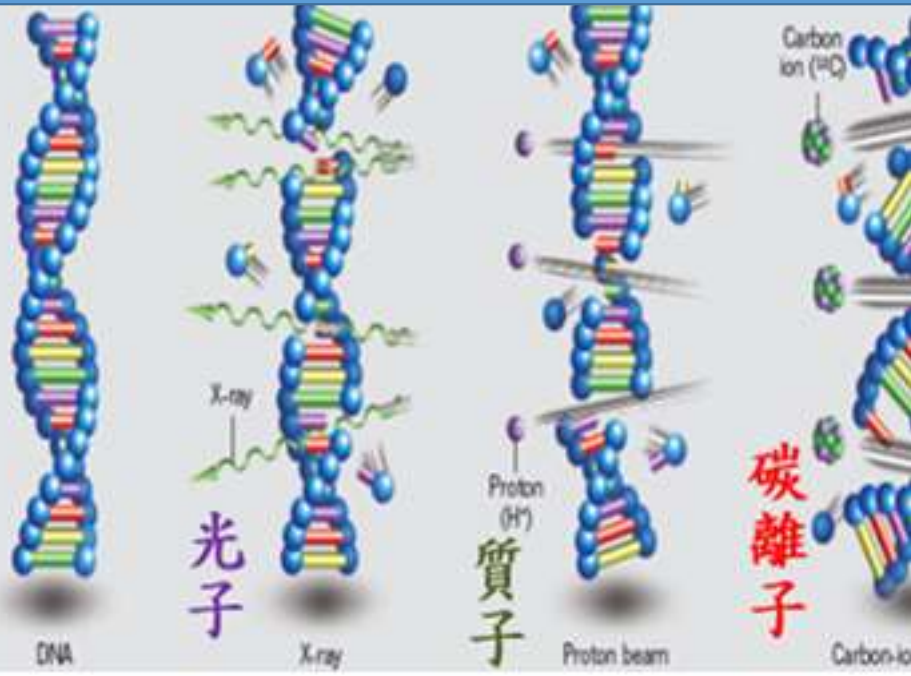
Cancer Type	Number of Treatments	Duration
Intracranial	16 times	4 weeks
Head and Neck	16 times	4 weeks
Lung(Stage I SCC)	1-4 times	Within 1 week
HCC	2-4 times	< 1 week
Kidney	12 times	3 weeks
Pancreas	12 times	3weeks
Prostate	12 times	3weeks
Postoperative recurrent rectal	16 times	4 weeks
Sarcoma	16 times	4 weeks
Gynecological	20 times	5 weeks



VIETNAMESE VERSION OF HEAVY-ION CENTER ON [YOUTUBE](#)

GREATEST HITS

Radiation can kill cancer cells by damaging their DNA. X-rays can hit or miss. Protons are slightly more lethal to cancer cells than X-rays. Carbon ions are around 2-3 times as damaging as X-rays.



BNCT (Boron Neutron Capture Therapy)
(硼中子捕獲治療)



**Patient with CNS primary sarcoma
referred from Japan**



International Medical Humanitarian Rescue Under the Pandemic



Liver transplantation:
2 cases of urgent liver transplantations
for infants coming from Vietnam
under COVID-19 (2020 – 2021)



Leukemia case: Indonesian migrant
worker received her sister's
donated stem cells
as CECC had lifted travel restrictions.

2020/09/17 11:17

台醫療實力強！北榮收治美籍女「骨髓移植」成功



▲患者與醫師合照。(臺北榮總提供)

醫療新南向再添佳話！台北榮總神救援：越南母來台捐肝救子成功

新頭殼newtalk | 蔡郁秋 綜合報導

發布 2021.03.23 | 15:50

Facebook, Twitter, YouTube, LINE, Email icons



清大北榮合作中子捕獲治癌 西班牙腦瘤病患跨海求治

Facebook, Twitter, LINE, Print icons



北榮醫師陳一理（左）與周風英討論治療方針。（記者蔡彰盛翻攝）

台首開邊境救命 5歲妹捐髓救女移工

台首開邊境救命 5歲妹捐髓救女移工 | 華視新聞 20201105



雲林 台北榮總骨髓血液腫瘤科主治醫師 蘇秀如 最大的困難是她年紀小 輸送測一路違規 女移送另罰21.34萬

台日醫療互助 日本腦癌女孩急送清華中子捕獲治療

聯合報 / 記者王藝志 / 新竹市報導



罹患癌症的日本女孩（中）在清大中子捕獲中心治療後，接受醫療團隊送上畢業方帽小禮。圖／清大提供



北榮搶救骨肉瘤少女 避免截肢

穿厚重裝備 負重室汗手術6小時 自體生物性重建 不必變成鋼骨人

【記者李郁人、魏哲軒、蕭偉心、沈孟博報導】台北榮總骨髓血液腫瘤科主治醫師蘇秀如日前在台北榮總中子捕獲中心，成功搶救一名罹患骨肉瘤的13歲少女，避免截肢。這項手術歷時6小時，手術過程艱難，但最終成功保住女孩的手。

這名少女在清大中子捕獲中心接受治療後，接受醫療團隊送上畢業方帽小禮。圖／清大提供

4. Partnership with Vietnam

	簽署合作備忘錄MOU之機構名	簽約日
越南 (25)	河內國家兒童醫院	2009.03.23
	海防醫科大學	2012.04.23
	胡志明醫藥大學附屬醫學中心	2022.07.20
	白梅醫院	2023.03.08
	中央熱帶醫院	2018.04.26
	河內醫學大學	2018.07.18
	河內藥學大學	2018.07.18
	越南國立大學	2018.07.18
	大水鑊醫院	2018.07.26
	胡志明市醫藥大學	2018.07.26
	胡志明市第三兒童醫院	2018.07.26
	胡志明市第一兒童醫院	2018.07.27
	首德醫院	2022.11.30
	震興醫院	2018.11.23
	越日國際腫瘤醫院	2018.11.30
	河內骨科復健醫院	2018.11.30
	越蘇友好醫院	2018.11.30
	越德醫院	2022.11.21
	茶榮省衛生廳	2019.10.29
	175胡志明軍方醫院	2019.11.29
	胡志明骨科醫院	2019.11.29
	芹苴醫學院附設醫院	2021.06.01
	越南統一醫院	2021.06.01
	河內腫瘤醫院	2021.07.30
	Vinmec	2022.07.26
108軍醫院	11211洽談拜會	
Hanoi Medical University	11211洽談拜會	
National Institute of Hematology and Blood Transfusion	11211洽談拜會	



25 MOUs IN THE PAST 20 YEARS



HEALTHCARE INDUSTRY EXHIBITION IN VIETNAM

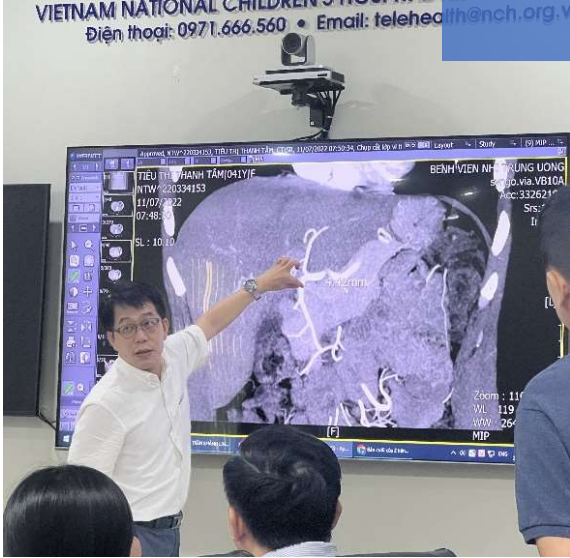




FROM THE VERY FIRST DAY, TAIPEI 2006...



ASSISTING VIETNAM NATIONAL CHILDREN HOSPITAL FOR 14 PEDIATRIC LDLTs 2007-2022





Veterans General Hospital – Oncology Hospital Joint Conference

Rectal cavity cancer

Speaker: 1st year resident:

Moderator: Dr. Ling Wei Wang



Taipei Veterans General Hospital – Hanoi Oncology Hospital Joint Conference

July 26, 2021

— 視病猶親 · 追求卓越 — 



Scientific meeting
Hanoi Oncology Hospital - Taipei Veteran General Hospital

RECTAL CANCER

Hanoi - Sep 29, 2021

2021-2022 VGH & HANOI ONCOLOGY HOSPITAL JOINT CONFERENCES



Scientific meeting
Hanoi Oncology Hospital- Taipei Veteran General Hospital

NON- SMALL CELL LUNG CANCER

Hanoi, Nov 24, 2021



CON-CRT vs SEQ -CRT in management of stage III NSCLC

Retrospective study comparing CON-CRT vs SEQ-CRT between 2003–2010¹

- Results of SEQ-CRT (n=90)
 - Median OS: 17.4 months
 - 5-year survival rate: 17%
- Results of CON-CRT (n=190)
 - Median OS: 18.8 months

Meta-Analysis comparing CON-CRT vs SEQ-CRT²



Veterans General Hospital – Oncology Hospital Conference

Esophageal carcinoma

Speaker: 3rd year resident Tien Li, Lan
Moderator: Dr. Cheng Ying, Shiao

— 視病猶親 · 追求卓越 — 



CVS & CV LIVE SURGERY DEMO AT BACH MAI HOSPITAL





**MOUs SIGNING WITH
VIET DUC,
VINMEC
& BACH MAI
HOSPITALS
2022- 2023**



K HOSPITAL VISIT IN 2023





短期內計畫



- ◆ 希望在河內有一個辦公室，負責新南向業務的推動。
- ◆ 2024/3/30在河內舉辦醫學研討會，與越南專家互相交流並期望將榮總優質醫療及台灣醫藥及相關產業帶入越南。





Thank You!