





PHILOSOPHY

Honesty, Friendship, Dedication and Innovation.

POSITIONING

Become a National Grade Tumor Prevention & Treatment Center which combines medical treatment with training and research.

MISSION

To cure cancer and bring happiness to people's lives.

GOALS

To build the most comprehensive specialized hospital nationwide with the largest scale of service and the highest level of diagnosis and treatment, and the most comprehensive optimization of medical teaching and research base of cancer science with top international level.



OFFICIAL CENTER WEBSITE http://english.sysucc.org.cn/

CANCER COMMUNICATIONS https://onlinelibrary.wiley.com/journal/25233548



FORWARD

For all at Sun Yat-Sen University Cancer Center (SYSUCC), 2020 has been a year to remember, a year full of great effort and hard work. The Center, guided by Xi Jinping Thought on Socialism with Chinese Characteristics for the New Era, has learnt from and put into practice the spirit of the Fifth Plenary Session of the 19th Central Committee, strengthening Party building within public hospitals, and incorporating Party building into the Center's charter. Implementation of the President's accountability system under the guidance of the Party Committee has strengthened awareness of and adherence to the rules and created a positive and healthy working atmosphere. In keeping with Sun Yat-Sen University's "Double World-Class" objective, no effort is being spared in realising the construction of the best tumor center in the world. Looking back on the 'rather unordinary' year that was 2020, we can see the brave efforts of staff at SYSUCC who toiled tirelessly in their mission and through their exertion forged a new path in career development.

Never forgetting why we started, and understanding life is paramount, our work never let up as we continued the race against time for the health and wellbeing of our patients.

"Resumption of work is an unshirkable responsibility" - when the pandemic hit at the beginning of 2020 our staff held to their posts, continuing their duty towards patients who did not have the luxury of time in which to wait for the pandemic to blow over. The Center closed ranks and firmly established a line of defence from which to comprehensively treat high-risk patients. In order to service cancer patients whilst ensuring social distancing, innovative remote solutions such as the 'Cloud Clinic', 'Safe Medication Delivery', 'Online Medication Consulting', and 'Party Online Medical Teams' were utilised. Various measures have since been taken to steadily resume offline diagnosis and treatment with service levels having almost returned to normal. Strong pandemic prevention and control has been realised throughout, as well as orderly tumor diagnosis and treatment, an effective return to work, and maintenance of excellent service in the face of difficulty to serve our patients.

Staying true to our mission, we became "heroes in harm's way" as we rushed to assist Wuhan fight the COVID-19 pandemic.

When disaster struck, help came from all sides as the whole country acted with one heart in the fight against the coronavirus. On the fourteenth day of the first lunar month, the day before the Lantern Festival, SYSUCC volunteered for services to assist Hubei and went with haste to Wuhan Union Hospital of China to help in the treatment of patients suffering from the novel coronavirus. Without a second thought towards the danger of the situation, the 16 member team carried the weight of the world on their shoulders and the mission of SYSUCC in their hearts as they fought on the front line against the coronavirus and tried to keep the rest of the world safe. The "Public Health System Novel Coronavirus Pneumonia Prevention and Control Advanced Group" is a title well deserved!

Courageous in creativity and in purpose, a grand conference in Guangzhou contributed to the health industry.

Following a year of preparation and a hundred days of hard work, SYSCC successfully hosted the 2020 Chinese Conference on Oncology and drew high praise from both colleagues in the medical field and from society at large. During the conference, 119 academic meetings were held, with on-site participation of 10,000 representatives. Offline, 101 activities promoting science took place across 26 provinces reaching tens of millions of people. SYSUCC, as the organising host, gave the conference a new lease of life through their focus and dedication, fully demonstrating the ideals of "perfection through spirit, wisdom through unity".

Feelings run deep and difficult struggles endure, yet continuing achievements shine through.

Improving Medical Services – through accelerated equipment upgrades SYSUCC became the first medical unit in Guangdong Province with two Da Vinci surgical robots; through attaching importance to innovation in diagnosis and treatment technology, we realised continuous growth in the numbers of new technologies and projects; through overcoming the impact of the coronavirus pandemic we have expanded our services and improved service delivery to meet, and continue striving for, the needs of our patients. A prominent doctor of SYSUCC was awarded the "Life Honoring Glorious Doctor" Golden Lancet Award for public welfare, and many others were awarded the title of "Nationally Recognized Doctor".

Talent acquisition success – a number of national high-level talents have joined us, the "three-level and eight-level" talent introduction system has been further improved, and our team of scientific research personnel has also developed steadily. Teaching materials have been improved with the publishing in 2020 of two national-level planning textbooks and one Chinese Academy of Sciences planning textbook. Training models have been optimised to further attract high-quality students, and a new evaluation system has been put in place to select outstanding mentors allowing the best to train the best.

Remarkable scientific research results - the number and total monetary amount of projects approved by the National Natural Science Foundation of China hit a record high, further improving the capacity to undertake a large national strategy and social needs facing projects. Major scientific research results continue to emerge, and the level of research in basic, clinical and translational fields of tumors has sprung to the forefront of the world. The hospital management system has been continuously improved through exploring the reform of scientific research evaluation system based on scientific contribution and value creation. As a pilot hospital, we have actively explored and innovated the modern hospital management system; the Center's President was awarded both the 2020 China Excellent Hospital Dean award and was recognised as a National Model Worker.

It is time for us now to sail against the tides and chart a new course that will help make dreams a reality.





President: Xu Ruihua Secretary of Party Committee: Wu Shaoxin

In this new year, we must firmly leverage the Guangdong-Hong Kong-Macao Greater Bay Area and the high positioning of cancer prevention medical science. We must formally engage in the management and operation of multiple hospitals, explore smart hospital operational models, implement equal quality management of diagnosis and treatment, technological innovation, as well as logistical services, and we must improve the guality of medical treatment services. We will actively attract and nurture top talents, maintain a world-class level of scientific research and innovation, strive to create innovative achievements in additional and wider fields, and we will further expand the impact of our studies. To do so, we shall always put 'Three Orientations' and 'Three Major Constructions' into practice, use international frontiers as a benchmark, and strive to achieve further breakthroughs in original and innovative results such as basic translational, diagnosis and treatment technology, as well as new medicinal research and development.

2021 marks the launch of the '14th Five-Year Plan'. As we stand at the historical intersection of the 'Two Centenary Goals', we look back on great achievements that have been made, and on the valiant staff of SYSUCC. We remember and carry forward the kindness and compassion of our SYSUCC forbearers and their tireless pursuit of perfection. Steadfast in the original pursuit of a doctor whilst shouldering the mission of the New Era, we take striving for a better life for the people as our goal and keep this inspiration in front of us to spur us on to even further medical breakthroughs and innovations!

LEADERSHIP TEAM



Xu Ruihua **President and Professor**

Responsible for the administrative functions of the Center, as well as development goals, discipline construction, team building, clinical experiments, the Cancer Communications journal, and leadership healthcare services; responsible for the Party Administrative Office (joint administration), Department of Clinical Research, and the Editorial Office.



Wu Shaoxin Secretary of Party Committee

Responsible for the Party's Central Committee work, with tasks including organization, propaganda, united front work, and the retiring of cadres; responsible for the Party Administrative Office (joint administration).



Ma Jun **Deputy President and** Professor

Responsible for teaching (including enrollment) and Preventative Medicine; he is responsible for the departments including the Scientific Research and Education Division (teaching), and the Department of Cancer Prevention.



He Yun Deputy Secretary of Party Committee, Secretary of the Discipline **Inspection Commission**

Responsible for discipline inspection, supervision, auditing, clean governance, the Teacher's Representative Committee, Labor Union, Communist Youth League, cultural construction, archives, equipment, letters and visits, and confidential affairs. He assists the management with party structure establishment, and post departure and retirement work. He is responsible for the departments including the Auditing and Supervision Department, the Disciplinary Inspection Office, Labor Union, and the Chinese Communist Youth League Committee.



Zeng Musheng

Professor and Vice-President Responsible for research administration (including platform construction), co-ordinates innovation, and international collaboration and exchanges. He is responsible for the departments including the Scientific Research and Education Division (Scientific Research Administration, International Office), and the Department of Experimental Research.

Peng Wangqing Professor and Vice-President

Responsible for general affairs (including property management, logistics, capital construction, equipment, fire protection, and safety and security), radiation protection, laboratory safety, construction of new campus, and performance. He is responsible for the departments including the Department of General Affairs, Office of New Campus Construction, and Department of Finance (performance).



Sun Ying

Professor and Vice-President campus.



Liu Zhuowei **Professor and Vice-President**

Responsible for healthcare (including public medicine, medical insurance, in-hospital influenza control, employee healthcare, medical records management), nursing, pharmaceutical affairs, medical business expansion, establishing ethically sound structures, assist the hospital with cadre's healthcare work. He is responsible for the departments including the Department of Medical Affairs, Department of Nursing and Pharmacy.



Ding Zhaoxia Chief Accountant

Responsible for hospital operation management, finances and state-owned asset management, and the management of the Cancer Center's Main Pharmacy and Guanhua Healthcare Technology Development Company. She is responsible for the Department of Finance.

Responsible for human resources, the establishment of informationalised procedures, Huangpu campus, and assists with the management discipline of the building, and team building. She is responsible for the departments including the Department of Human Resource Management, Department of Medical Affairs (Information), and the Huangpu



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	Department of Clinical Research
	Department of Clinical Nutrition
	VIP Inpatient Department
	Department of Traditional Chinese Medicine
	Department of Nasopharyngeal Carcinoma
	Department of Radiation Oncology
	Biotherapy Center
	Department of Pediatric Oncology
	Department of Hematological Oncology
	— Department of Medical Oncology
	Intensive Care Unit
	Department of Blood Transfusion
	Department of Anesthesiology
	and Operating Theatre Department of Bone
	and Soft Tissue Surgery
	 Department of Head and Neck Surgery
	 Department of Neurosurgery
	 Department of Urology
	— Department of Gynecologic Oncology
	— Department of Colorectal Surgery
	Department of Liver Surgery
	Department of Pancreatic & Biliary Surgery
	Department of Gastric Surgery
	Department of Breast Oncology
	Department of Thoracic Surgery
ging and nimally	Department of
nvasive	Department of Medical Imaging
Center	Department of Endoscopy
	Department of Nuclear Medicine
	Department of Illtrasound
	and Electrocardiogram
	Department of Medicine Laboratory
	Department of Pathology
	Department of Molecular Diagnosis
ortment	- Screening Center for Cancer Prevention
Cancer evention	Department of Cancer Prevention Research

Editorial Office of Cancer Communications

PERSONNEL OVERVIEW

General Personnel Structure Post Structure of In-service Personnel



TOTAL: 3,658





Doctor's Degree 787

Educational Background of In-service Personnel

Technical Secondary School 146

Master's Degree

ANNUAL REPORT 10



MEDICAL WORK

In 2020, the Center implemented important instructions from General Secretary Xi Jinping and the decisions and arrangements of the CPC Central Committee. We made concerted efforts to win the battle against the COVID-19 pandemic prevention and control, strictly implementing the working mechanism of joint prevention and control of the pandemic, and strengthening coordination amongst various departments to ensure that all pandemic prevention and control tasks were implemented and that medical services could be provided in an organized manner.

The Center continued to emphasize the concept of providing medical services that are "centered around patients and with quality at the core". An "Internet +" medical service system was built, and new technologies were introduced to optimize the patient treatment process, innovate the service model, and improve the medical treatment experience on all fronts.

The Center has also been gradually promoting the reform of the provincial and municipal medical insurance system, improving the quality of business handling to protect patients' rights and interests. Moreover, an "Information Highway" was built to share clinical teaching resources online through events such as the "Doctor Show"—a week of live streaming of Oncology surgeries using the Da Vinci surgical robot, and the grand rounds of the Center's Department of Medical Oncology. The Center has been steadily promoting the high-level hospital construction project and has achieved its mid-term construction objectives. In addition, it has organized a series of activities to disseminate scientific knowledge to thousands of people. Over 100 activities have been held in more than 100 cities, with more than 100 oncology specialists participating and benefiting more than one million people.

2020 Medical Work Status

Diagnosis & Hospital Treatment Visits Admissions Status				Bed Status					
	Outpatient Visits	Emergency Visits	Hospital Stay Visits	Number of Hospital Stay Operations	Average Stay Duration (Days)	Number of New Beds	Average Number of Released Beds	Bed Turnovers	Bed Usage Rate (%)
	1,009955	5,479	12,4637	23,820	3.93	0	1,425	87.67	91.08

Outpatient Workload

Category	2019	2020	YoY Increase (%)
Total Outpatient Visits	1,183,136	1,015434	-14.2
First Visit	220,879	211,302	-4.3
Return Visit	962,257	804,132	-16.4
Special Needs	27,168	31,387	15.5

Top Ten Diseases among New Outpatients

Ranking	Name of Disease	Number of Visits	Proportion %
1	Lung Cancer	5,177	12.6
2	Nasopharyngeal Carcinoma	4,904	11.9
3	Colorectal Cancer	3,523	8.6
4	Breast Cancer	3,147	7.6
5	Liver Cancer	2,963	7.2
6	Thyroid Cancer	2,598	6.3
7	Hemolymph Tumor	2,270	5.5
8	Cervical Cancer	1,934	4.7
9	Gastric Cancer	1,669	4.1
10	Esophageal Carcinoma	1,458	3.5

Top Ten Diseases among New Outpatients



- Lung Cancer 5,177
- Nasopharyngeal Carcinoma 4,904
- Colorectal Cancer 3,523
- Breast Cancer 3,147
- Liver Cancer 2,963
- Thyroid Cancer 2,598
- Hemolymph Tumor 2,270
- Cervical Cancer 1,934
- Gastric Cancer 1,669 •
- Esophageal Carcinoma 1,458

Type of Medical Insurance of Hospital In-patients

Type of Medical Insurance	NO. of Discharges	Proportion %	YoY Increase (%)
Guangzhou Medical Insurance	13,618	11.0	0.2
Medical Insurance of other cities within the province	66,121	53.3	0.2
Medical Insurance of cities of other provinces	23,083	18.6	2.6
Out-of-pocket Payment	102,822	83.0	2.9

Operational Workload

Units	2019
Department of Head and Neck Surgery	3,846
Department of Thoracic Surgery	3,286
Department of Gynecologic Oncology	3,020
Department of Breast Oncology	3,293
Department of Urology	3,031
Department of Colorectal Surgery	1,959
Department of Gastric and Pancreatic Surgery	1,447
Department of Liver Surgery	1,163
Department of Pancreatic & Biliary Surgery	142
Department of Neurosurgery	1,060
Department of Bone and Soft Tissue Surgery	803

Origin of Hospital In-patients

Province	Number	YoY Comparison (±%)
Guangzhou City	15,205	3.1
Guangdong Province (excl. Guangzhou)	72,266	-5.2
Other Chinese Provinces	37,262	-10.2
Hong Kong, Macao, Taiwan	187	-28.1
Overseas	35	-49.3



- Last year
- This year

2020	YoY Increase (%)
3,983	3.6
3,022	-8.0
2,635	-12.7
2,772	-15.8
2,713	-10.5
1,940	-1.0
1,288	-11.0
829	-28.7
285	100.7
935	-11.8
664	-17.3

New Medical Technology & Projects

Name of New echnology/New Project	Department	Person in Charge	Technological Innovation
Disposable multi-channel single-port laparoscopic minimally invasive colorectal surgery	Department of Colorectal Surgery	Pan Zhizhong, Li Liren	This invisible incision can meet the cosmetic needs of some patients. Wound pain may be lessened, and both the labor cost and medical expenses can be reduced.
Robot-assisted hyper enlarged lymph node dissection in the treatment of bladder cancer	Department of Urology	Liu Zhuowei, MD, PhD	This surgery leaves a small trauma, has a fast postoperative recovery rate, and reduces perioperative complications; it improves the tumor control probability by removing the metastatic lymph nodes and micro-metastasis.
Robot-assisted retroperitoneal lymph node dissection in the treatment for testicular carcinoma	Department of Urology	Liu Zhuowei, MD, Ph.D.	This surgery leaves a small trauma, has a fast postoperative recovery rate, better retains ejaculation function and reduces complications.
The application of robotic-assisted retropubic prostatic enucleation	Department of Urology	Zhou Fangjian, Li Yonghong	It leaves a small trauma, has a fast postoperative recovery rate, better retains ejaculation function and reduces complications.
Robotic-assisted laparoscopic partial nephrectomy: usage of region-selective renal artery occlusion	Department of Urology	Han Hui, Zhou Fangjian	It meets the requirements of renal tumor resection and suture without increasing perioperative complications and reducing postoperative renal function damage.
Single-port laparoscopic adrenal tumor resection	Department of Urology	Guo Shengjie	It leaves a smaller trauma and has a fast recovery rate. It can also reduce the number of wounds, postoperative pain, and scar formation.
The application of transperineal prostate biopsy with cognitive target fusion	Department of Urology	Li Yonghong, Wu Zhiming	Combining real-time Color Doppler ultrasound with MRI improves the accuracy and positive rate of aspiration biopsy and reduces the risk of post-surgery infection.
Applying robotic-assisted sutureless renal tumor enucleation in treating less complicated renal tumors	Department of Urology	Zhang Zhiling	A more normal renal parenchyma can be preserved, surgical trauma can be further reduced, and kidney function can be better retained.
Endoscopic ultrasound-guided biliary drainage	Department of Endoscopy	Shan Hongbo	Suitable for patients on whom traditional ERCP or PTCD cannot be performed because their duodenal papilla has been invaded and damaged by tumors. It can improve the quality of life of patients with inoperable malignant obstruction of the biliary tract.
The Tumor Treating Fields "Planning System"	Department of Neurosurgery	Mu Yonggao	TTFields can help better correlate patients' clinical status through their X-ray results. Any MRI sequence can be used to determine whether to proceed with a treatment plan. When planning the NovoTAL treatment scheme, the patient's clinical status, sequential imaging, and response to treatment can be continuously tracked.
Individualized Endoscopic Endonasal Skull Base Reconstruction Technique	Department of Neurosurgery	Jiang Xiaobing, Sai Ke, Mu Yonggao, Wang Jian, Lin Fuhua	It reduces the onset of complications such as postoperative cerebrospinal fluid leakage and intracranial infection. The skull base endoscopic technique makes resection possible for sellar craniopharyngioma, chordoma, and chondrosarcoma, all of which were previously difficult to resect through endoscopy.

Name of New echnology/New Project	Department	Person in Charge	Technological Innovation
The Application of Electrophysiological Monitoring in Endoscopic Resection of Pituitary Adenoma	Department of Neurosurgery	Jiang Xiaobing, Wen Xia, Sai Ke, Mu Yonggao	The intraoperative VEP, SEP, and MEP are combined to measure pituitary adenoma resection, the traction on the internal carotid artery, and the influence on the optic nerve, and to send out warnings to avoid potential damage.
Balloon Occlusion Test and Embolization of the Internal Carotid Artery	Department of Minimally Invasive Therapy, Department of Nasopharyngeal Carcinoma	Fan Weijun, Gu Yangkui, Chen Mingyuan	It reduces the risk of heavy bleeding after radiotherapy for nasopharyngeal cancer and during debridement for nasopharyngeal necrosis, providing assistance for debridement for nasopharyngeal necrosis.
DSA-guided Balloon-occluded retrograde transvenous obliteration (BRTO)	Department of Minimally Invasive Therapy	Gao Fei, Zhang Tianqi, Qi Han	It has significant advantages in treating patients with s bulky gastrorenal shunt and in the treatment and prevention of gastric variceal hemorrhage and refractory hepatic encepha- lopathy.
Laparoscopic proximal gastrectomy with jejunal interposition and dual-channel reconstruction	Department of Gastric and Pancreatic Surgery	Yuan Shuqiang, Zhou Zhiwei	It offers more refined and individualized lymph node dissection and selective neuroprotection. The reconstruc- tion of the digestive tract is operated under direct vision in the lumen, therefore, the trauma could be further reduced and a larger portion of the stomach may be retained.
Thoracoscopic total thymectomy using a subxiphoid approach	Department of Thoracic Surgery	Ma Guowei	The thymus gland can be completely removed and the surgical trauma, intraoperative blood loss, and postopera- tive complications like pain reduced. The surgery also meets cosmetic needs as it leaves only small wound in places out of sight.
Complete portal robotic segmentectomy under artificial pneumothorax for early stage lung cancer	Department of Thoracic Surgery	Yang Haoxian	This surgery leaves minimal incisions and the process is precisely controlled, avoiding compression to the ribs and reducing complications. The surgeons have a better view of the surgical area and mediastinal oscillations can be reduced.
Using helical tomotherapy in total skin irradiation as treatment for mycosis fungoides	Department of Radiation Oncology	Xia Yunfei, Chen Baoqing, Kang Dehua, Xu Senkui, Tao Yalan, Sun Wenzhao, Chi Feng, Huang Xiaoyan, Lin Chengguang	The treatment dose is uniformly distributed without having to connect the irradiation fields; the treatment takes a short amount of time with no repeated irradiation, thus improving the efficacy and reducing complications.
PET/MR Imaging	Department of Nuclear Medicine	Wei Fan	PET/MR scans deliver more accurate diagnoses compared with conventional diagnostic methods. In addition to MR's high resolution soft tissue, they provide the biological information of the patient to help outline a more accurate and more individualized target area.
Radium RA-223 dichloride in the treatment of castration-resistant prostate cancer with bone metastases	Department of Nuclear Medicine, Department of Urology	Fan Wei, Zhou Fangjian	It can significantly prolong OS and delay the occurrence of bone related incidence, and can reduce adverse reactions and improve the quality of life of patients

Partnerships

In September 2017, the Center established the Central & Southern China Tumor Specialist Alliance with more than fifty hospitals located both within and outside of Guangdong Province. To this day, 65 hospitals have joined the Alliance.

Areas in Guangdong Province	Name of Hospital	Other Provinces	Name of Hospital
	Cancer Center of Guangzhou Medical University		Henan Cancer Hospital
	Guangzhou Yuexiu District First People's Hospital	Henan	Henan Province Nanshi Hospital of Nanyang
	Guangzhou City Yuexiu District Hospital of Chinese Medicine		Anyang Cancer Hospital
Guangzhou	Guangzhou Twelfth People's Hospital	Hubei	Hubei Cancer Hospital
	The Fifth Affiliated Hospital of Guangzhou Medical University		Hunan Cancer Hospital
	Guangzhou Panyu Clifford Hospital		Chenzhou No. 1 People's Hospital
	Guangzhou Panyu Central Hospital	Нирар	Zhuzhou Central Hospital
	Shenzhen Luohu Hospital Group	nunan	The First Affiliated Hospital of University of South China
	The First People's Hospital of Foshan		Zhuzhou No. 2 Hospital
	The First People's Hospital of Shunde		Shaoyang Hospital of TCM
	Jiangmen Central Hospital		Hainan General Hospital
Pearl River Delta	Kaiping Central Hospital	Hainan	Hainan Cancer Hospital
r carriiver Delta	The First People's Hospital of Zhaoqing		The Second People's Hospital of Hainan Province
	The Third People's Hospital of Shenzhen		Tumor Hospital of Guangxi Medicine University
	Zhongshan City People's Hospital		Wuzhou Red Cross Hospital
	Dongguan People's Hospital	Guangxi	Affiliated Hospital of Youjiang Medical University for Nationalities
	Zhuhai People's Hospital		Affiliated Hospital of Guilin Medical University
	Yue Bei People's Hospital		The First Affiliated Hospital of Guangxi Medical University
North Guangdong	Fogang County People's Hospital		Jiangxi Province Oncology Hospital
	Qingyuan People's Hospital	Jiangxi	Ganzhou Oncology Hospital
	Cancer Hospital of Shantou University Medical College		Third People's Hospital of Jiujiang City
	Shantou Central Hospital	Macao	University Hospital
	Meizhou People's Hospital	Fujian	Fujian Province Cancer Hospital
East Guangdong	Guangdong Province Shanwei Yihui Fund Hospital	rujian	Longyuan First Hospital
Last Guangaong	Heyuan City People's Hospital	Yunnan	Yunnan Cancer Hospital
	Jieyang People's Hospital		Yunnan Province Yuxi City People's Hospital
	Puning People's Hospital	Guizhou	Guizhou Cancer Hospital
	Chaozhou Central Hospital	Guizhou	Affiliated Hospital of Zunyi Medical University
	Yunfu People's Hospital	Shaanxi	Affiliated Hospital of Yan'an University
	Guangdong Province Nongken Central Hospital	Anhui	Anhui Jimin Cancer Hospital
West Guangdong	Lianjiang People's Hospital	Vinitona	Affiliated Tumor Hospital of Xinjiang Medical University
	Affiliated Hospital of Guangdong Medical University	Ang	The First People's Hospital of Kashgar Prefecture
	Guangdong Province Nongken Central Hospital	Anhui	Anhui Jimin Cancer Hospital



NURSING CARE

OVERVIEW

In 2020, the hospital's nursing work centered around the implementation of the guiding principles of the 19th CPC National Congress and the strategic objective of building a healthy China. We put the patients at the center of our attention, further enhancing the quality of our nursing service and promoting the "Internet + high-quality nursing service" model. During the outbreak of COVID-19, the nursing team was actively involved in the treatment, prevention, and control of the pandemic, and formed a team to collect pharyngeal swabs, making great contributions in screening COVID-19. We continued to emphasize clinical nursing quality in our management, carrying out various PDCA quality improvement projects to boost service quality, patients' medical experience and specialized nursing quality. As a result, the quality of our work has seen a constant rise in quality. In terms of specialized development, seven new specialized nursing techniques were carried out in 2020, and the Center has become the training base (outside Beijing) for the Chinese Nursing Association for specialized nurses in oncology and colostomy wounds. In addition, we have established the "National Enterostomy Nursing Coalition" to provide technical support and organize exchange and learning events. In summary, the Center has obtained outstanding performance in discipline construction, talent cultivation, nursing research, and education.

Nursing Team Introduction

There were a total of 1,452 nurses employed in 2020, including 1,396 clinical nurses and 56 non-clinical nurses. The positional titles of nurses primarily include ward nurse and head nurse, including 4 nursing directors and 42 deputy director nurses. A total of 956 nurses have a bachelor's degree, constituting the majority of the nursing team; and there are 57 postgraduate students and one doctoral student.

Degree Structure of Nurses in the Hospital



Positional Title Structure of Nurses in the Hospital



Overview of Nursing Work in 2020 Specialist Nursing Work Specialist Nursing Core Workload in 2020

Type of Care	Core Workload			
	Total catheter number (visits)			
Catheter outpatient	No. of central venous catheters maintained (visits)		53,524	
	No. of severe cases of	consultations (visits)	12	
		Colostomy care	4,081	
	Outpatient (visits)	Wound care	8,712	
		Incontinence care	104	
		Registration no.	6,364	
Colostomy wound		Colostomy care	10,274	
	No. in-hospital consultations (visits)	Wound care	41,678	
		Incontinence care	260	
		Wound consultation	30 consultations via WeChat	
	No. of diagnoses outside hospital (visits)	Colostomy consultation	20 consultations via WeChat	
	Outpatient treatment (visits)	Edema of the upper limbs	1,500	
		Edema of the lower limbs	760	
		Other	675	
Lymphedema		Edema of the upper limbs	35	
	Inpatient treatment (visits)	Edema of the lower limbs	30	
		Other	25	
	Body fat measurement (visits)			
	No. Diagnoses outs	ide hospital (visits)	20 Remote Consultations	
	Psychome	try (visits)	2,725	
	Psychological guidance (visits)			
Psychological relief	Crisis intervention (visits)			
	In-hospital consultations (visits)			
	Continuity of care (visits)			
	No. Outpatient patients received (due to COVID-19,	the outpatient clinic was not open until July 22nd)	639	
Deglutition specialized department	No. Inpatient deglutition screenings			
	No. In-hospital consultations			

NURSING EDUCATION WORK **Clinical Nursing Education in 2020**

Clinical Education (number of people)			On-th Specialized (number o	le-job l Education of people)
Postgraduate clinical practice	Graduate internships	Graduate probation	Sponsored teaching by Royal Lee Hospital commissioned training	Clinical practice of specialized nurses
16	92	26	35	96

Advanced Education

A total of 99 advanced students from all over China were received in 2020, among which 89% came from tertiary hospitals and 58% came from cities other than Guangzhou. 100% of the advanced students have the nursing specialist title or above, and 3% have senior professional titles.

We actively carried out technical support projects, sending three head nurses to Puning People's Hospital (Hu Wen), Shanwei Second People's Hospital (Zhang Zhang) and Guangzhou Modern Hospital (Wang Yalan) to provide support for 6 months, respectively. In addition, specialized teams were sent to the Hospital of Alliance four times to provide support.

QUALITY CONTROL Nursing QC Indicators for 2020

Indicator	Percentage of this year
Correct implementation of clinical services whole process follow-up assessment (90%)	97.02
Nurse awareness and implementation of reporting system procedures of 'critical values' (100%)	100
Blood transfusion service meets rates of standardization (100%)	100
Special / high risk pharmaceuticals storage and accordance rate (100%)	99.75
Evaluation rate of patients at high risk of pressure sores (90%)	99.75
Risk evaluation rate of high-risk patient fall, and fall out of bed (90%)	100
Serviceability rate of common apparatus, equipment and emergency goods (100%)	100
High quality nursing: ward ratings \ge 95%; Satisfaction rates of patients and nursing staff to high quality nursing \ge 95%	97.88
Nursing errors, flaws 0 cases, complaints due to nursing misconduct < 1 case	0
Awareness rate of nurses of the reporting system for adverse events (100%) Reporting rate of adverse events (100%); possess targeted cause analysis for adverse events	100

NURSING RESEARCH

In 2020, the Department of Nursing obtained 7 scientific research fund projects or approved projects, and published 42 nursing papers in core journals, including 15 SCI papers. The Department of Nursing edited or participated in writing 5 monographs, obtained 11 patents, and held 7 continuous education classes.



Support



RESEARCH

OVERVIEW

In 2020, the total budgetary expenditure of the research projects led by our hospital reached RMB 230 million. Among these projects, there were 219 longitudinal projects, with a total budgetary expenditure of RMB 83.48 million. These included one National Key Research and Development Plan project, 102 projects of National Natural Science Foundation of China, with direct funds of RMB 51.54 million, including two key projects, one joint fund key project. one mathematical Tian Yuan Fund project, one joint fund project, one international (regional) cooperation and exchange project, 49 surface projects and 47 youth science funds projects. In addition, 188 cooperation and new drug clinical research projects were signed, with an annual receipt of RMB 147.25 million.

In terms of the research of main disciplines, the Center has made significant progress in various fields including frontier science, translational medical science, and new strategies for cancer treatment. The Research results have been published in internationally renowned academic journals such as Nature Cell Biology, Cell Research, JAMA, and JCO, etc.

This shows that the Center is at the forefront of the world's research on oncology. By the end of 2020, the Center published 525 papers in SCI journals as the first unit (with volume number and page number), including 40 papers with a journal impact factor above 10 and 6 papers with a journal impact factor above 20. Professor Ma Jun's team won the 2020 Wu Jieping Medical Innovation Award and the first prize of the 2020 Higher Education Outstanding Scientific Research Output Awards (announced) for their research results of the precise diagnosis and treatment scheme of nasopharyngeal carcinoma.

Funded National Scientific Research Projects in 2020

Project Type	Project Name	Project No.	Person in Charge	Funding Amount (10 thousand yuan)
National Key Research and Development Plan Project	Research on the development of new technologies and the optimization of programs for screening nasopharyngeal carcinoma in high-incidence areas	2020YFC1316900	Sun Ying	912
National Key Research and Development Plan Topic	Promoting screening in high-incidence areas and establishing large-scale screening cohort	2020YFC1316904	Sun Ying	105
National Key Research and Development Plan Topic	Carrying out randomized controlled screening trials, and optimizing and evaluating new screening schemes	2020YFC1316905	Cao Sumei	373
Key Project of the National Natural Science Foundation of China	The role, mechanism, and clinical significance of KLF16-Myc in the positive reciprocal regulation and promotion of the proliferation and growth of carcinoma of the bladder	82030090	Kang Tiebang	298
Key Project of the National Natural Science Foundation of China	Design of a novel vaccine for Epstein-Barr virus based on the structure of pre-gB and receptor interaction	82030046	Zeng Musheng, MD, PhD.	297
Joint Funding Project from the National Natural Science Foundation of China	The key role and mechanism of MDSC in recurrence of hepatocellular carcinoma after thermal ablation	U20A20370	Huang Jinhua	260
Tian Yuan Fund from the National Natural Science Foundation of China	An individualized clinical intelligent decision-making algorithm and supporting system for nasopharyngeal carcinoma based on multi-omics big data	12026601	Sun Ying	200
International Collaborative Projects of the National Natural Science Foundation of China	The mechanism of chromosome 11q13 amplification mediating resistance of esophageal squamous cell carcinoma to PD-1 antibody	82061160373	Wang Feng	150
Excellent Young Scientists Fund of the National Natural Science Foundation of China	Metabolic Remodeling and Targeted Therapy Strategies for Tumors	82022052	Ju Huaiqiang	120
Surface Project of the National Natural Science oundation of China	Optimization of a tumor control probability model in precision radiotherapy for lung cancer based on a restricted reproliferation model	82073328	Liu Hui	55
Surface Project of the National Natural Science Foundation of China	Study on the mechanism and intervention of p38y-mediated abnormal pathway of cholesterol metabolism promoting the progression of pancreatic cancer	82073317	Fang Wang	55
Youth Fund of the National Natural Science Foundation of China	Multi-dimensional Bayesian model construction based on multi-omics data integration and identification of functional susceptibility locus of nasopharyngeal carcinoma	82003520	Wang Tongwen	24
Youth Fund of the National Natural Science Foundation of China	Study on the role and mechanism of Adriamycin induced Neutrophil extracellular traps in cardiotoxicity	82003859	Nie Man	24
Youth Fund of the National Natural Science Foundation of China	The mechanism of TET1 regulating SLIT2 expression affecting the immune microenvironment of colorectal cancer and the efficacy of PD-1 antibodies	82003269	Wang Zixian	24
Youth Fund of the National Natural Science Foundation of China	The mechanism of APG-115, a small molecule inhibitor targeting the MDM2/p53 signaling pathway, promoting autophagy-mediat- ed T cell immune activation in gastric cancer cells	82003268	Zhang Lin	24

Project Type	Project Name	Project No.	Person in Charge	Funding Amount (10 thousand yuan)
Youth Fund of the National Natural Science Foundation of China	Molecular Mechanism of NK-1R Receptor Antagonist Aprepitant Inhibiting the Invasive-Metastasis of Nasopharyngeal Carcinoma by Regulating the PI3K/Akt Pathway	82003267	Liu Liting	24
Youth Fund of the National Natural Science Foundation of China	The role and mechanism of FZR1 M6a Methylation Modification in Gemcitabine Resistance of Pancreatic Cancer	82003162	Zhang Jialiang	24
Youth Fund of the National Natural Science Foundation of China	Molecular Mechanism of Long Non-coding RNALinc01956 Regulating Cisplatin Resistance in Ovarian Cancer	82003128	Wu Geyan	24
Youth Fund of the National Natural Science Foundation of China	The Function and Mechanism of M6A Recognition Protein IGF2BP3 Regulating TEAD4 RNA Methylation to Promote Metastasis of Nasopharyngeal Carcinoma	82003081	Wang Lin	24
Youth Fund of the National Natural Science Foundation of China	Mechanism of G3BP2 and LINC01554 interacting to regulate the AKT/mTOR pathway and promote the invasion and metastasis of esophageal squamous carcinoma	82003056	Zheng Yinli	24
Youth Fund of the National Natural Science Foundation of China	Mechanism of COL6A1 targeting STAT1 and fibroblast promoting lung metastasis of osteosarcoma	82003055	Zhang Ying	16
Youth Fund of the National Natural Science Foundation of China	Molecular mechanism of BAG4 inducing chemotherapy tolerance in breast cancer	82003052	Jian Yunting	24
Youth Fund of the National Natural Science Foundation of China	Mechanism of signal transduction factor TROP2 regulating glycolysis and promoting liver metastasis of colorectal cancer	82003051	Peng Jianhong	24
Youth Fund of the National Natural Science Foundation of China	Mechanism of RAS signaling promoting the stemness phenotype and breast epithelial carcinogenesis through GATA3-mediated transcriptional remodeling	82002943	He Bin	24
Youth Fund of the National Natural Science Foundation of China	Molecular mechanism and significance of inhibition of P53 transcriptional activity by RBM28 nucleolus-nucleoplasmic translocation	82002917	Zhou Liwen	16
Youth Fund of the National Natural Science Foundation of China	Study on the mechanism and intervention of p38γ-mediated abnormal pathway of cholesterol metabolism promoting the progression of pancreatic cancer	82002898	Wen Xizhi	24
Youth Fund of the National Natural Science Foundation of China	Mechanism of CD55 combined EGFR targeting with monoclonal antibodies in the treatment of nasopharyngeal carcinoma	82002872	Zhu Qian	24
Youth Fund of the National Natural Science Foundation of China	Molecular mechanism and clinical application of gene mutation activating NF-ĸB pathway activity and driving nasopharyngeal carcinoma recurrence	82002857	You Rui	24
Youth Fund of the National Natural Science Foundation of China	Mechanism of LINC00173 promoting the progression of nasopharyngeal carcinoma by regulating endoplasmic reticulum-Golgi body vesicle transport through RAB1B	82002856	Zhang Yuan	24
Youth Fund of the National Natural Science Foundation of China	Cancer associated fibroblasts secrete ADM to activate AKT-mTOR pathway and promote glycolysis to maintain the stemness of tumor cells causing radiotherapy resistance of nasopharyngeal carcinoma and its mechanism	82002855	Liang Hu	24
Youth Fund of the National Natural Science Foundation of China	The role and molecular mechanism of plasma exosomal-derived M2BP in promoting metastasis of nasopharyngeal carcinoma	82002854	Yang Qi	24
Youth Fund of the National Natural Science Foundation of China	The molecular mechanism of CCL2 secreted by nasopharyngeal carcinoma cells to mobilize macrophages to promote resistance to radiation	82002855	Guo Shanshan	24

Project Type	Project Name	Project No.	Person in Charge	Funding Amount (10 thousand yuan)
Youth Fund of the National Natural Science Foundation of China	Role and mechanism of HDAC inhibitor chidamide in regulating PD-L1 expression and influencing the immune microenvironment of soft tissue sarcoma	82002835	Que Yi	24
Youth Fund of the National Natural Science Foundation of China	Study on RSPO3-LGR6 promoting the invasion and metastasis of ovarian cancer through PI3K/ AKT pathway	82002725	Gu Haifeng	24
Youth Fund of the National Natural Science Foundation of China	Effect and mechanism of DTX3 down-regulation of PD-L1 expression in inhibiting immune escape of carcinoma of the bladder	82002668	Zhang Yijun	24
Youth Fund of the National Natural Science Foundation of China	Youth Fund of the National Natural Science Foundation of China	82002666	Li Xiangdong	24
Youth Fund of the National Natural Science Foundation of China	Youth Fund of the National Natural Science Foundation of China	82002628	Ma Wenjuan	24
Youth Fund of the National Natural Science Foundation of China	Molecular mechanism of FTO-IGF2BP2 signaling axis activating NF-xB signaling pathway to promote malignant progression of gastric cancer by mediating M6A modification of KPNB1	82002561	Li Yue	24
Youth Fund of the National Natural Science Foundation of China	The mechanism of RBPJL-p.P476S mutation mediating T-cell immunosuppression in esophageal squamous cell carcinoma and its role in immunotherapy	82002476	Wei Xiaoli	24
Youth Fund of the National Natural Science Foundation of China	Multi-group analysis to explore the key molecular markers of colorectal cancer precancerous lesions	82002470	Chen Qingjian	24
Youth Fund of the National Natural Science Foundation of China	The molecular mechanism of NHE9 binding regulation of RACK1 and activation of Src/Akt pathway to induce cisplatin resistance in esophageal squamous cell carcinoma	82002469	Chen Junying	24
Youth Fund of the National Natural Science Foundation of China	Mechanism of ARHGAP15 promoting gastric cancer metastasis by inhibiting RAC1-ROS pathway	82002468	Jiang Chen	24
Youth Fund of the National Natural Science Foundation of China	The molecular mechanism and clinical significance of CIRC853 in promoting invasion and metastasis of colorectal cancer by activating the COL5A1/ tumor stemness pathway through M6A modification	82002467	Han Kai	24
Youth Fund of the National Natural Science Foundation of China	Construction of KRAS protein targeting degradation system BVC and its mechanism of reversing Gefitinib resistance in colorectal cancer cells	82002466	Yang Jie	24
Youth Fund of the National Natural Science Foundation of China	The role and mechanism of PRMT5 catalyzing MTHFD1 methylation in promoting ferroptosis resistance of esophageal squamous cell carcinoma cells	82002465	Lu Yunxin	24
Youth Fund of the National Natural Science Foundation of China	Function, mechanism, and clinical significance of cathepsin V promoting the progression of lung cancer	82002428	Huang Xiaodan	24
Youth Fund of the National Natural Science Foundation of China	Mechanism of ASCL1 mediating third generation TKI resistance after the transformation of lung cancer small cell through activation of EGFR downstream signaling pathway	82002409	Ma Yuxiang	24
Youth Fund of the National Natural Science Foundation of China	The mechanism of HER2 kinase α-C-β4 ring structure affecting sensitivity to targeted therapy in lung cancer	82002408	Zhao Kun	24
Youth Fund of the National Natural Science Foundation of China	The molecular mechanism of Ubiquitin-like protein ISG15 regulating PI3K/ Akt pathway activation IGFBP2 to promote the development of lung adenocarcinoma	82002407	Zhao Zerui	24

Project Type	Project Name	Project No.	Person in Charge	Funding Amount (10 thousand yuan)
Youth Fund of the National Natural Science Foundation of China	Construction and Application of Adapter Fluorescence Sensor Based on CRISPR and Hybrid Chain Reaction (HCR)	82002240	Xing Shan	24
Youth Fund of the National Natural Science Foundation of China	The potential of LOC440173 as a novel biomarker for nasopharyngeal carcinoma metastasis and its molecular mechanism	82002220	Zhang Lulu	24
Youth Fund of the National Natural Science Foundation of China	Study on PET tracer technology of multifunctional CAR-T cells based on SNAP reporter gene	82001855	Zhang Xiaofei	24
Youth Fund of the National Natural Science Foundation of China	The immunomodulatory role of clotting factor PKK in sepsis through nonclassical pathways and its mechanism	82001672	Ding Chao	24
Youth Fund of the National Natural Science Foundation of China	Adipose mesenchymal stem cell-derived exosomes promote aspirin-associated gastric mucosa by regulating the PTEN/PI3K/Akt signaling pathway through miR-23a-3p	82000558	Xia Xianfeng	24
Youth Fund of the National Natural Science Foundation of China	Using single cell sequencing to explore the mechanism of platelet/megakaryocyte abnormality induced by DNMT3A mutation	82000144	Dai Yujun	16
Surface Project of the National Natural Science Foundation of China	Macrophage reprogramming induced by chidamide targeted RNA splicing complex and its role in anti-T /NK cell lymphoma	82073917	Li Zhiming	55
Surface Project of the National Natural Science Foundation of China	Surface Project of the National Natural Science Foundation of China	82073882	Fu Liwu	56
Surface Project of the National Natural Science Foundation of China	Prospective epidemiological study on immune escape of EBV induced by specific methylation of HLA-DQ gene sequence and occurrence of nasopharyngeal carcinoma in southern China	82073625	Cao Sumei	55
Surface Project of the National Natural Science Foundation of China	The mechanism of ZNF652/Sonic Hedgehog axis mediating the induction of chronic N-dimethylnitrosamine in hepatocellular carcinoma stem cells and the intervention of sulforaphane	82073527	Han Hongyu	57
Surface Project of the National Natural Science Foundation of China	The mechanism of Wnt/β-catenin pathway in enhancing the efficacy of immunotherapy in non-small cell lung cancer by Niclosamide	82073396	Zhao Hongyun	55
Surface Project of the National Natural Science Foundation of China	Molecular mechanism of PI3K/ Akt /mTOR signaling pathway mediated DNA: RNA heterotrimer (R-loop) promoting endocrine therapy resistance of breast cancer	82073391	Shi Yanxia	55
Surface Project of the National Natural Science Foundation of China	Mechanism of IAP inhibitor APG-1387 enhancing the response of MSS intestinal cancer to PD-1 antibody by promoting IL-12p40 secretion	82073377	Qiu Miaozhen	55
Surface Project of the National Natural Science Foundation of China	The mechanism of radiation-induced stress granule blocking RFX-1/RBM47's inhibition of pyroptosis and causing radiation resistance of nasopharyngeal carcinoma	82073330	Zhao Chong	55
Surface Project of the National Natural Science Foundation of China	The intestinal anaerobes S.Moorei enhances radiation resistance in rectal cancer by inhibiting AGK and regulating the glycolysis of infiltrating CD8+T cells and its mechanism	82073329	Gao Yuanhong	55
Surface Project of the National Natural Science Foundation of China	Mechanism and intervention of TGF-β/ SMAD4 signaling pathway inactivation promoting targeted drug resistance and immune escape in BRAF(V600) mutated colorectal cancer	82073302	Wang Deshen	55
Surface Project of the National Natural Science Foundation of China	Using deep learning to explore ultrasonic endoscope imaging features to identify T1a and T1b esophageal squamous carcinoma as auxiliary diagnostic models	82073283	He Longjun	55

Project Type	Project Name	Project No.	Person in Charge	Funding Amount (10 thousand yuan)
Surface Project of the National Natural Science Foundation of China	Mechanism, function and clinical significance of CBX4 regulation by acetylation in osteosarcoma	82073243	Wang Xin	55
Surface Project of the National Natural Science Foundation of China	The discovery, validation, and signaling pathway analysis of the target molecules of antimetastatic new drugs	82073220	Qian Chaonan	55
Surface Project of the National Natural Science Foundation of China	Molecular function and mechanism of LNMAP1 in promoting lymph node metastasis of esophageal squamous cell carcinoma by regulating tumor-associated macrophage metabolism	82073189 Wang Xin		55
Surface Project of the National Natural Science Foundation of China	Single cell omics based study on the anti-PD-1 response mechanism of highly microsatellite unstable colorectal cancer	82073159	Ding Peirong	57
Surface Project of the National Natural Science Foundation of China	The mechanism of tumor immunogenicity influenced by modification of GGPP, a regulatory protein of mevalonate metabolism pathway	82073140	Wang Zining	57
Surface Project of the National Natural Science Foundation of China	The role and mechanism of circSLCO1B3 in brain metastasis of triple-negative breast cancer	82073117 Tang Hailin		57
Surface Project of the National Natural Science Foundation of China	Study on the role and mechanism of LncRNA MALR combined with ILF3 and ILF2 proteins in regulating phase separation and promoting proliferation of esophageal cancer	82073112	Li Hao	55
Surface Project of the National Natural Science Foundation of China	Study on the evolutionary process of recurrent ependymoma and the action mechanism of its driver gene ADGRLX	82073109	Wang Jing	55
Surface Project of the National Natural Science Foundation of China	Study on the role and mechanism of HINFP in carcinoma of bladder	82073103	Liu Zhuowei, MD, PhD.	57
Surface Project of the National Natural Science Foundation of China	Mechanism of DNMT3A/ MI-378A/Tbx3 apparent signaling axis regulating malignant transformation and stemness maintenance of osteosarcoma	82073034	Lu Jinchang	55
Surface Project of the National Natural Science Foundation of China	Molecular mechanism of neonatal mutation FRMD6 promoting malignant transformation of nasopharyngeal epithelial cells in children and adolescents through PI3K-Akt pathway	82073003	Tang Linquan	55
Surface Project of the National Natural Science Foundation of China	Prediction model and mechanism of nasopharyngeal carcinoma induced chemotherapy based on imaging genomics	82072992	Tang Linglong	55
Surface Project of the National Natural Science Foundation of China	Study on the role and mechanism of the core regulatory network driven by super-enhancer in nasopharyngeal carcinoma	82072982	Zhong Qian	55
Surface Project of the National Natural Science Foundation of China	The mechanism of NCoA3 /MTHFD1L inducing radiotherapy resistance of tongue squamous cell carcinoma by regulating Redox homeostasis	82072981	Yang Ankui	55
Surface Project of the National Natural Science Foundation of China	Role and Mechanism of Histone Demethylase KDM3B Mutant Promoting Vascular Mimicry in Sarcomas and Predicting the Efficacy of Pazopanib	82072958	Zhang Xing	55
Surface Project of the National Natural Science Foundation of China	Study on the role and mechanism of glycogen synthase GYS1 in ovarian cancer proliferation	82072853	Liu Lili	55
Surface Project of the National Natural Science Foundation of China	Study on the Formation of Vascular Mimicry in Glioma Promoted by Extracellular Protein Tenascin-C and Its Mechanism	82072761	Chen Zhongping	55

Project Type	Project Name	Project No.	Person in Charge	Funding Amount (10 thousand yuan)
Youth Fund of the National Natural Science Foundation of China	Study on the Role and Mechanism of Inflammatory Cytokines Regulating the Phosphorylation of hnRNPL Protein through TRF-21-VBY in the Development and Progression of Pancreatic Cancer	82072617	Zheng Jian	55
Youth Fund of the National Natural Science Foundation of China	The mechanism of FTO promoting EBV-associated gastric cancer immune escape by mediating M6A methylation modification of SMAD7	82072612	Zeng Zhaolei	55
Youth Fund of the National Natural Science Foundation of China	The mechanism of CPSF6 mediated NOLC1 alternative polyadenylation to promote the proliferation of hepatocellular	82072611	Jing-ping Yun	55
Youth Fund of the National Natural Science Foundation of China	The mechanism of LncRNA DUBR regulating the stemness of liver cancer cells through Notch and chemotherapy resistance	82072610	Shi Ming	55
Youth Fund of the National Natural Science Foundation of China	Molecular mechanism and function of alternative splicing of long non-coding RnADGCR5 in esophageal cancer	82072609	Song Libing	55
Youth Fund of the National Natural Science Foundation of China	Study on the Function and Mechanism of KLF16 in Promoting Malignant Progression of Colorectal Cancer by Regulating Endoplasmic Reticulum Stress	82072608	Xie Dan	55
Surface Project of the National Natural Science Foundation of China	Using single-cell RNA-seq to delineate the microenvironment cell atlas of esophageal squamous cell carcinoma (ESCC) and explore the effect of chemokine CCL19 on ESCC's sensitivity to radiotherapy and chemotherapy	82072607	Wen Jing	55
Surface Project of the National Natural Science Foundation of China	The molecular mechanism and clinical significance of circNRIP1 inhibiting POFUT1/Notch in the regulation of colorectal cancer development	82072606	Pan Zhizhong	55
Surface Project of the National Natural Science Foundation of China	The molecular mechanism by which NRIP3 is upregulated and ubiquitinated in esophageal squamous cell carcinoma to remove RTF2 and thereby induce cell resistance to chemoradiotherapy	82072604	Li Yan	55
Surface Project of the National Natural Science Foundation of China	Mechanism and clinical significance of P300 mediated acetylation of CpsF4 in promoting distant metastasis of non-small cell lung cancer	82072572	Yang Haoxian	55
Surface Project of the National Natural Science Foundation of China	The role and mechanism of RNA methylation in regulating VEGFA expression to promote brain metastasis of lung cancer	82072559	Chen Likun	55
Surface Project of the National Natural Science Foundation of China	The mechanism of ALK fusion upregulating TGF-β to induce polarization mediated resistance of M2 macrophages against primary PD1/PD-L1 immunotherapy in lung cancer microenviron- ment	82072558	Yang Yunpeng	55
Surface Project of the National Natural Science Foundation of China	The mechanism of PMN-MDSCs mediated resistance to TACE and TKI in liver cancer through activation of endoplasmic reticulum stress-lipid metabolism	82072022	Zhao Ming	55
Surface Project of the National Natural Science Foundation of China	Study of multimodal cluster molecular imaging probe in the diagnosis and treatment of breast cancer with oncogenic mutations of RAS	82071978	Yang Jiang	55
Surface Project of the National Natural Science Foundation of China	Mechanism of YTHDF1 mediated M6A methylation of circ-NF1 to promote beta-arrestin2 transmembrane and participate in morphine tolerance	82071237	Ouyang Handong	55
Surface Project of the National Natural Science Foundation of China	The PD-L1 expression and intervention strategy in the microenvironment of diffuse large B-cell lymphoma induced by neutrophils extracellular traps	82070215	Xia Yi	55
Surface Project of the National Natural Science Foundation of China	The regulating mechanism of the degradation of fusion protein RAB22A-NEOF1 in osteosarcoma and its clinical significance	32070765	Liao Dan	58

Project Type	Project Name	Project No.	Person in Charge	Funding Amount (10 thousand yuan)
Surface Project of the National Natural Science Foundation of China	The influence of chromosome aneuploidy on the evolution of genomic instability and phenotypic adaptation	32070592	Yue Jiaxing	58
Surface Project of the National Natural Science Foundation of China	Study of the effects of chemotherapeutic drugs on genomic stability under different genetic backgrounds using yeast experiment system	32000395	Li Jing	24
Surface Project of the National Natural Science Foundation of China	Research on the comprehensive quantitative evaluation and active quality control method of radiotherapy schemes based on machine learning	12075329	Chen Li	60
Surface Project of the National Natural Science Foundation of China	On-line dose verification study of radiotherapy for nasopharyn- geal carcinoma based on MR images	12005316	Peng Yinglin	24
Surface Project of the National Natural Science Foundation of China	Study on a New Dose Calculation Approach for Radiotherapy Based on Deep Learning and Monte Carlo Dose Algorithm	12005315	Zhu Jinhan	24

2020 Research Awards (Provincial, ministerial level and above)

Award	Award Recipient Project Name		Issuing Authority
First Prize in Higher Education Outstanding Scientific Research Output Award (disclosed)	Ma Jun, Sun Ying, Liu Na, Cao Sumei, Xie Fangyun, Zhang Yuan, Li Wenfei, Chen Lei, Li Yingqin, Tang Linglong, Ji Mingfang, Mo Haoyuan, Mao Yanping, Liu Xu, Chen Yupei	Establishment and application of accurate diagnosis and treatment scheme for nasopharyngeal carcinoma	Ministry of Education
Wu Jieping Medical Innovation Award	Ma Jun	Research on prevention and treatment of nasopharyngeal carcinoma	Wu Jieping Medical Foundation

Department	1 st Author	Communicator	Paper name	Periodical Name: Year, volume (week): page no.	Impact factors (IF)
Department of Medical Oncology	Luo Huiyan Zhao Qi Qi Wei Zheng L,Yi S	Xu Ruihua	Circulating tumor DNA methylation profiles enable early diagnosis, prognosis prediction, and screening for colorectal cancer	Sci Transl Med.2020 Jan 1; 12(524):eaax7533	16.304
Department of Experimental Research	Ziyang Wang Ziyang Wang	Chen Shuai	RNAi Screening Identifies that TEX10 Promotes the Proliferation of Colorectal Cancer Cells by Increasing NF- κ B Activation	Adv Sci (Weinh).2020 Jul 7; 7(17):2000593	15.84
Department of Experimental Research, Department of Nasopharyngeal Carcinoma	Guo Yunmiao Chen Jierong Feng Yanchun Melvin L. K. Chua,Yanni Zeng	Bei Jinxin Zeng Yixin External Unit Mai Haiqiang	Germline Polymorphisms and Length of Survival of Nasopharyngeal Carcinoma: An Exome-Wide Association Study in Multiple Cohorts	Adv Sci (Weinh).2020 Mar20; 7(10):1903727	15.84
Department of Breast Oncology, Department of Experimental Research	Deng Rong Huang Junhao Wang Yan Zhou Lihuan	Tang Jun Zhu Xiaofeng	Disruption of super-enhancer-driven tumor suppressor gene RCAN14 expression promotes the malignancy of breast carcinoma	Mol Cancer.2020 Aug 8; 19(1):122	15.302
Department of Experimental Research, Department of Radiation Oncology	Hong Xiaohong Liu Na Liang Yelin	Li Yinqin Ma Jun	Circular RNA CRIM1 functions as a ceRNA to promote nasopharyngeal carcinoma metastasis and docetaxel chemoresistance through upregulating FOXQ1	Mol Cancer.2020 Feb 15; 19(1):33	15.302
Department of Medical Oncology	Cai Jun Liu Panpan Huang Huiqiang	Cai Qingqing	Combination of anti-PD-1 antibody with P-GEMOX as a potentially effective immunochemotherapy for advanced natural killer/T cell lymphoma	Signal Transduct Target Ther. 2020 Dec 30;5(1):289	13.493
Department of Medical Oncology	Hu Peishan Li Ting Lin Jinfei	Xu Ruihua Luo Huiyan	VDR-SOX2 signaling promotes colorectal cancer stemness and malignancy in an acidic microenvironment	Signal Transduct Target Ther. 2020 Sep 9;5(1):183	13.493
Department of Experimental Research	Luo Min	Fu Liwu	Mitomycin C enhanced the efficacy of PD-L1 blockade in non-small cell lung cancer	Signal Transduct Target Ther. 2020 Aug28;5(1):141	13.493

Selection of Papers Published in 2020 (SYSUCC as the corresponding author)

IF > 20.0

Department	1 st Author	Communicator	Paper name	Periodical Name: Year, volume (week): page no.	Impact factors (IF)
Department of Experimental Research	Lin Guowang Caigang Xu Kexin Chen Huang Huiqiang Jieping Chen Bao Song John K C Chan Wenyu Li	Bei Jinxin	Genetic risk of extranodal natural killer T-cell lymphoma: a genome-wide association study in multiple populations	Lancet Oncol.2020 Feb; 21(2):306-316	33.752
Department of Gynaecologic Oncology	Lan Chunyan Shen Jingxian Wang Yin Li Jundong Liu Zhimin	Huang Xin Xiong Ying	Camrelizumab plus apatinib in patients with advanced cervical cancer (CLAP): a multicenter, open-label, single-arm, phase 2 trial	J Clin Oncol.2020 Dec 1; 38(34):4095-4106	32.956
Department of Medical Oncology	Yang Yunpeng Jianya Zhou	Zhang Li	Efficacy, safety, and biomarker analysis of ensartinib in crizotinib-resistant, ALK-positive non-small-cell lung cancer: a multicentre, phase 2 trial	Lancet Respir Med.2020 Jan; 8(1):45-53	25.094
Department of Nasopharyngeal Carcinoma	Youping Huang Peiyu Zou Xiong Sun Rui YuXiang He	Chen Mingyuan External Unit	Efficacy and Safety of Locoregional Radiotherapy With Chemotherapy vs Chemotherapy Alone in De Novo Metastatic Nasopharyngeal Carcinoma A Multicenter Phase 3 Randomized Clinical Trial	JAMA Oncol.2020 Sep 1; 6(9):1345-1352	24.799
Department of Radiation Oncology Department of Experimental Research	Chen Yupei Jianhua Yin Li Wenfei Hanjie Li Dongping Chen Cuijuan Zhang	Ma Jun Liu Na 3 External Units	Single-cell transcriptomics reveals regulators underlying immune cell diversity and immune subtypes associated with prognosis in nasopharyngeal carcinoma	Cell Res.2020 Nov; 30(11):1024-1042	20.507
Department of Experimental Research	Liao Dan Zhong Li Junqiang Yin	Kang Tiebang External Unit	Chromosomal translocation-derived aberrant Rab22a drives metastasis of osteosarcoma	Nat Cell Biol.2020 Jul; 22(7):868-881	20.042

$\textbf{20.0} \geq \textbf{IF} > \textbf{10.0}$

$\textbf{20.0}~ \geq \textbf{IF} > \textbf{10.0}$

Department	1stAuthor	Communicator	Paper name	Periodical Name: Year, volume (week): page no.	Impact factors (IF)
Department of Experimental Research, Department of Medical Oncology	Liu Jia Liu Zexian Wu Qinian Lu Yunxin ChauWei Wong	Ju Huaiqiang Xu Ruihua	Long noncoding RNA AGPG regulates PFKFB3-mediated tumor glycolytic reprogramming	Nat Commun.2020 Mar20; 11(1):1507	12.121
Department of Experimental Research, Department of Breast Oncology	Li Zhilin Zhang Hailiang Huang Yun	Deng Rong Zhu Xiaofeng Tang Jun	Autophagy deficiency promotes triple-negative breast cancer resistance to T cell-mediated cytotoxicity by blocking tenascin-C degradation	Nat Commun.2020 Jul 30; 11(1):3806	12.121
Department of Medical Oncology	Su Yanhong Huang Jiajia Wang Shusen	Yuan Zhongyu	The Effects of Ganglioside-Monosialic Acid in Taxane-induced Peripheral Neurotoxicity in Patients with Breast Cancer: A Randomized Trial	J Natl Cancer Inst .2020 Jan 1; 112(1):55-62	11.577
Department of Experimental Research	Ma Xiaoyan Hong Zhang	Gao Song	Structures of mammalian GLD-2 proteins reveal molecular basis of their functional diversity in mRNA and microRNA processing	Nucleic Acids Res.2020 Sep 4; 48(15):8782-8795	11.502
Department of Experimental Research	Zuo Zhixiang Hu Huanjing	Ren Jian External Unit Zhao Qi	BBCancer: an expression atlas of blood-based biomarkers in the early diagnosis of cancers	Nucleic Acids Res.2020 Jan 8;\ 48(D1):D789-D796	11.502
Department of Experimental Research	JiaLi Hu He Liang Zhang Hong Mingzhu Yang	Gao Song 2 External Unit	FAM46B is a prokaryotic-like cytoplasmic poly(A) polymerase essential in human embryonic stem cells	Nucleic Acids Res.2020 Mar 18; 48(5):2733-2748	11.501
Department of Breast Oncology, Department of Experimental Research	Zheng Shaoquan Yang Lu Zou Yutian Liang Jieying	Xie Xiaoming Tang Hailin	Long non-coding RNA HUMT hypomethylation promotes lymphangiogenesis and metastasis via activating FOXK1 transcription in triplenegative breast cancer	J Hematol Oncol.2020 Mar 5; 13(1):17	11.059
Biotherapy Center, Department of Nasopharyngeal Carcinoma	Zhu Qian Ai Lin Zhong Hao Hu	Xia Jianchuan Guo Ling	Acylglycerol kinase promotes tumour growth and metastasis via activating the PI3K/AKT/GSK3 beta signalling pathway in renal cell carcinoma	J Hematol Oncol.2020 Jan 3; 13(1):2	11.059

Department	1 st Author	Communicator	Paper name	Periodical Name: Year, volume (week): page no.	Impact factors (IF)
Department of Experimental Research	Yang Chuan	Fu Liwu	The prospects of drug sensitivity testing at the single cell level	Drug Resist Updat. 2020 Dec 20; 54:100741	11
Department of Breast Oncology, Department of Experimental Research	Yang Lu Li Ning Xue Zhicheng	Xie Xiaoming Tang Hailin	Synergistic therapeutic effect of combined PDGFR and SGK1 inhibition in metastasis-ini- tiating cells of breast cancer	Cell Death Differ.2020 Jul; 27(7):2066-2080	10.717
Department of Head and Neck Surgery	Di Wu	Liu Xuekui External Unit	Oxidation-sensitive polymeric nanocarri- er-mediated cascade PDT chemotherapy for synergistic cancer therapy and potentiated checkpoint blockade immunotherapy	Chemical Engineering Journal.2020 Jul; 1385-8947	10.625
Department of Nasopharyngeal Carcinoma	Liu Sailan Lijuan Bian Liu Zexian Chen Qiuyan Sun Xuesong	Mai Haiqiang	Development and validation of the immune signature to predict distant metastasis in patients with nasopharyngeal carcinoma	J Immunother Cancer.2020 Apr; 8(1):e000205	10.252
Department of Radiation Oncology, Department of Experimental Research	Wang Yaqin Chen Lei Mao Yanping	Ma Jun Li Yingqin	Prognostic value of immune score in nasopharyngeal carcinoma using digital pathology	J Immunother Cancer.2020 Jul; 8(2):e000334	10.252
Department of Medical Oncology	Chen Xinru Zhang Zhonghan Hou Xue	Zhang Li Zhao Hongyun	Immune-related pneumonitis associated with immune checkpoint inhibitors in lung cancer: a network meta-analysis	J Immunother Cancer.2020 Aug; 8(2):e001170	10.252
Department of Endoscopy	He Longjun Xie Chuanbo Wang Zixian Li Yin	Li Jian-jun	Submucosal saline injection followed by endoscopic ultrasound versus endoscopic ultrasound only for distinguishing between T1a and T1b esophageal cancer	Clin Cancer Res.2020 Jan 15; 26(2):384-390	10.107
Department of Medical Oncology	Tian Xiaopeng Su Ning Liang Wang Weijuan Huang	Cai Qingqing	A CpG Methylation Classifier to Predict Relapse in Adults with T-Cell Lymphoblastic Lymphoma	Clin Cancer Res.2020 Jul 15; 26(14):3760-3770	10.107



TEACHING

OVERVIEW

In 2020, the Center adhered to the goal of cultivating talents with "integrity, capability, leadership, and patriotism", implemented the fundamental task to "foster virtue through education", accelerated the training of high-level compound medical talents and steadily promoted the construction of the world's top tumor center. Throughout the year, the Center smoothly completed its medical education training goals at a range of grades, including undergraduates, extended (8-year) course doctoral students, postgraduate students, resident doctors, specialist doctors, advanced studies, and continuing education.

Focusing on high-quality students and strictly controlling the enrolment process, the number of students admitted to direct doctoral programs continued to rank first in affiliated hospitals. Specific attention was paid to the key links of doctoral education to ensure the quality of dissertations. As a result, the qualified rate of dissertations of postgraduate students in the national spot-check reached 100%, and 53% of master's students continued with doctoral study. Three postgraduate supervisors were awarded excellent master's and doctoral supervisors of the university and one master's student won the title of "excellent student" at the provincial level.

The Center has published two textbooks under the national plan and one under the plan of the Chinese Academy of Sciences, further emphasizing the leading role of test books.

A specialized supervisor program to support Kashgar, Xinjiang in groups was implemented, and six professional master's students were allocated to receive one-year clinical training in Kashgar, creating a new training model for professional master's students. The general teacher training course of standardized training for resident doctors in Guangdong Province was held. A total of 58 teachers passed the training examination and obtained the provincial teacher training certificate, which was conducive to the improvement of teaching ability and the building of a high-guality teaching team for the training of resident doctors.



Postgraduate Supervisor Team

The Center currently has a total of 420 postgraduate supervisors eligible to recruit students, of whom 166 are doctoral supervisors, and 254 are master's supervisors. The postgraduate supervisors of each system are allocated as follows:



There are 27 doctoral supervisors and 45 master's supervisors in the Radiotherapy system (including the Department of Radiation Oncology and Department of Nasopharyngeal Carcinoma).



There are 27 doctoral supervisors and 54 master's supervisors in the Medical Oncology System (including the Department of Medical Oncology, Biotherapy Center, Department of Endoscopy, Department of Comprehensive Traditional Chinese Medicine, ICU, Department of Hematological Oncologyncology and Department of Pediatric Oncology).



There are 43 doctoral supervisors and 79 master's supervisors in the Surgery System (including the Department of Thoracic Surgery, Department of Liver Surgery, Department of Pancreatic and Biliary Surgery, Department of Colorectal Surgery, Department of Neurosurgery, Department of Head and Neck Surgery, Department of Gastric Surgery, Department of Gynecologic Oncology, Department of Urology, Department of Breast Oncology, and the Department of Bone and Soft Tissue Surgery).



There are 56 doctoral supervisors and 54 master's supervisors in the research system/platform administrative office (this includes the Department of Experimental Research, Anesthesiology, Department of Pathology, Department of Clinical Research, Department of Molecular Diagnosis, Department of Clinical Laboratory, Pharmacy, the Department of Cancer Prevention Research, Screening Center for Cancer Prevention, and Outpatient Administra-



There are 13 doctoral supervisors and 22 master's supervisors in the imaging system (including the Department of Medical Imaging, Department of Ultrasound and Electrocardiogram, Department of Minimally Invasive Therapy, and the Department of Nuclear Medicine).





doctoral supervisors

doctoral supervisors

doctoral supervisors

Postgraduate Student Numbers

There are currently 959 postgraduate students studying at the Center, among which 536 are doctoral students (including 15 students on eight-year courses and 11 doctors of engineering) and 423 are master's students.



In 2020, the Center enrolled an additional 169 doctoral students (exclusive of the four doctors of engineering), of which 81 are graduates of '985' higher education institutes and comprise 48% of the total number of newly enrolled doctoral students. The Center also enrolled an additional 181 master's students, of which 61 are graduates of '985' higher education institutes and comprise 34% of the total number of newly enrolled master students. Six doctoral candidates of the eight-year course were enrolled this year. Recommended and examination exempt enrolled students numbered 74 and included 32 doctoral and 42 master's students.







Secretary Wu and Secretary He visited students in their dormitories and sent epidemic prevention packages after students resumed classes following the COVID-19 outbreak

Education Reforms and Research Projects

Project Name	Origin	Prize Level	Project Members	Department
Clinical Oncology (5th Edition)	Undergraduate Teaching Quality Engineering Program of Sun Yat-sen University	University Level	Xu Ruihua	Teaching and Graduate Students Section
Molecular Diagnostics in Clinical Oncology	Undergraduate Teaching Quality Engineering Program of Sun Yat-sen University	University Level	Wang Fang	Department of Molecular Diagnosis
The Application of Laparoscopic Simulator in Oncological Training of Carcinoma of Colon and Rectum	Undergraduate Teaching Quality Engineering Program of Sun Yat-sen University	University Level	Peng Jianhong	Department of Colorectal Surgery

2020 National Training Class for Continuing Medical Education Projects

No.	Implementation Date	No. of Project	Project Name	Person in Charge	Credit	No. of participants
1	2020-11-12 ~2020-11-15	2020-01-04-045 (CN)	Training on Standardized Treatment on Tumor Pathology and Individualized Medicine	Yun Jingping	б	400
2	2020-11-14 ~2020-11-15	2020-06-04-082 (CN)	Pediatric Oncology Discussion & Pediatric Tumor Committee of the Guangdong Provincial Anticancer Association Continued Education Class	Sun Xiaofei	4	328
3	2020-12-17~ 2020-12-21	2020-09-04-170 (CN)	Treatment Class for Microwave Ablation on Actual Tumors	Fan Weijun	8	102
4	2020-11-13~ 2020-11-15	2020-09-04-166 (CN)	Seminar on Medical Advances in Oncology Core	Fan Wei	6	179
5	2020-12-25~ 2020-12-27	2020-09-04-164 (CN)	TIPS New Framework Applied Class	Gao Fei	4	250
6	2020-12-12~ 2020-12-12	2020-09-03-051 (CN)	Learning Class for Clinical Standards on Nasopharyngeal Carcinoma (NPC) Radiotherapy and Application of New Technologies	Yunfei Xia	10	155
7	2020-12-18~ 2020-12-19	2020-09-03-050 (CN)	Guangzhou Summit on Nasopharyngeal Carcinoma & Learning Class for Minimally Invasive Surgery for Nasopharyngeal Carcinoma	Ming-yuan Chen	8	276
8	2020-12-04~ 2020-12-05	2020-09-02-087 (CN)	Standardized Diagnoses of Tumor Ultrasound and Intervention Treatment Class	Zhou Jianhua Zhou	8	197
9	2020-10-10~ 2020-10-11	2020-04-08-189 (CN)	South China Kidney Tumor Combined Therapy Study Class	Han Hui	4	89
10	2020-11-14~ 2020-11-15	2020-04-08-188 (CN)	New Advances in the Treatment of Uropoiesis Reproducing Class of Tumors and Standardized Treatment Class	Zhou Fangjian	4	119
11	2020-06-19~ 2020-06-21	2020-04-08-186 (CN)	Learning Class for Advances in Multi-Disciplinary Treatment for Liver Cancer	Chen Minshan	8	277
12	2020-12-04~ 2020-12-06	2020-04-08-185 (CN)	Guangzhou International Lung Cancer Forum	Long Hao	6	160
13	2020-12-17~ 2020-12-19	2020-04-08-058 (CN)	Training on Progress of Treatment for Liver Metastases of Colorectal Cancer	Pan Zhizhong	6	188
14	2020-11-18~ 2020-11-21	2020-04-08-057 (CN)	New Advances and the Standardized Treatment of Malign Gynecological Tumors Class	Liu Jihong	8	174
15	2020-12-11~ 2020-12-12	2020-04-08-053 (CN)	New Advances in the General Treatment of Tumors of the Head and Neck Forum	Yang Ankui	6	296
16	2020-11-12~ 2020-11-15	2020-04-04-097 (CN)	Learning Class for Glioma Tumor Basic & Clinical Advances	Mu Yonggao	6	76
17	2020-08-28~ 2020-08-30	2020-03-10-420 (CN)	Breast Cancer Oncology Treatment Class	Wang Shusen	6	280
18	2020-09-10~ 2020-09-13	2020-03-10-410 (CN)	Guangzhou Lymphoma Summit Forum and New Advances in the Diagnosis and aTreatment of Malign Lymphoma Class	Jiang Wenqi	8	400
19	2020-07-16~ 2020-07-19	2020-03-10-409 (CN)	POST-ASCO Society Information Exchange Meeting and Pearl River Delta Tumor Study Class	Lin Tongyu	10	344
20	2020-08-06~ 2020-08-09	2020-03-10-155 (CN)	Learning Class for Advances in Tumour Oncology Precise Medicine and Personalized Treatment	Zhang Li	8	411
21	2020-12-25~ 2020-12-27	2020-12-25~ 2020-12-27	Learning Class for Advances in Tumour Oncology Precise Medicine and Personalized Treatment	Zhang Li	8	402
22	2020-12-04~ 2020-12-06	2020-03-10-155 (CN)	Learning Class for Advances in Tumour Oncology Precise Medicine and Personalized Treatment	Zhang Li	8	391
23	2020-12-25~ 2020-12-27	2020-04-08-186 (CN)	Learning Class for Advances in Minimally Invasive Diagnosis and Esophagus Cancer Treatment	Fu Jianhua	6	234
24	2020-12-12~ 2020-12-12	2020-09-03-125 (CN)	International Head & Neck Tumor Symposium	Ma Jun	3	111

No.	Implementation Date	No. of Project	Project Name	Person in Charge	Credit	No. of participants
25	2020-12-19~2020-12-20	2020-04-12-052 (CN)	Learning Class for Advances in Melanomas and Tumor Immunotherapy	Zhang Xiaoshi	2	89
26	2020-09-24~2020-09-25	2020-14-05-852 (CN)	Seminar on Continual Improvement in Intravenous Therapy MDT Quality Led by Specialist Nurses	Qin Huiying Qin	10	99
27	2020-11-12~2020-11-15	2020-04-08-111 (CN)	2020 Chinese Conference on Oncology	Xu Ruihua	5	25921
28	2020-12-18~2020-12-19	J20201904463	Learning Class for Advances in Diagnosis and Treatment of Common Malignant Tumors	Zhang Bei	5	220

2020 List of Resident/Specialist Doctors in Each Department

The Center currently has 397 in-training resident doctors (including the SRT/MM), and 63 in-training specialist doctors. Standardized training graduation assessment for resident doctors and specialist doctors was completed, and 94 resident doctors and 24 specialist doctors passed the assessment.

2020 List of In-training Resident Doctors / Specialist Doctors in Each Department:

No	Resident physician	Resident physician		Resident physician				Total
NO.	Speciality Base	Department	Sun Yat-Sen University Cancer Center	Others Enlisted	General Recruitment	SRT/MM Degree	Doctor	IOLAI
1		Department of Medical Oncology	7	6		22	6	41
2		Department of Hematological Oncology	4				3	7
3	Department of Medical Oncology	Department of Pediatric Oncology	1			3		4
4		VIP Inpatient Department				4		4
5		Biotherapy Center	1			3		4
б		Department of Head and Neck Surgery	2	1	2	11		17
7		Department of Thoracic Surgery	5		3	23	2	33
8		Department of Breast Oncology	4		2	3	3	12
9		Department of Liver Surgery	3		2	10	2	17
10	Department of Surgery	Department of Pancreatic & Biliary Surgery	4			1	1	6
11	5.7	Department of Gastric and Pancreatic Surgery	5		2	6	2	15
12		Department of Colorectal Surgery	6	1			1	15
13		Department of Urology	3		4	5	3	15
14		Department of Neurosurgery	2		2	9	1	14
15		Department of Bone and Soft Tissue Surgery	3		1		2	6
16	Department of Gynaecology and Obstetrics	Department of Gynaecologic Oncology	4		3	8	1	16
17	Department of Anesthesiology	Department of Anesthesiology and Operating Theatre	9		3	20	5	37
18	Department of Clinical Pathology	Department of Pathology	3	7	2	12	4	28
19	Department of edical Laboratory	Department of Medicine Laboratory	1		2			1
20	Department of Radiology	Department of Medical Imaging	10	2	1	19	8	40

21	Department of Ultrasound	Department of Ultrasound and Electrocardiogram	5	2	1	10	3	18
22	Department of Nuclear Medicine	Department of Nuclear Medicine	7			3		10
23	Department of	Department of Nasopharyngeal Carcinoma	2			6	3	10
24	Radiation Oncology	Department of Radiation Oncology	4	4	3	25	9	45
25		Department of Molecular Diagnosis	1			2	1	4
26		Department of Endoscopy	1			9		10
27		Phase 1 hospital Ward	3				1	4
28		Department of Minimally Invasive Therapy	2				3	5
29		Intensive Care Unit	1			9	1	11
30		Electrocardiogram (ECG)	2					2
31		Zhongshan People's Hospital Base	1			1		1
	Total		105	23	31	238	63	460

2020 List of Advanced Students in Each Department

Department	Total (visits)	Department	Total (visits)
Department of Pathology	18	Department of Liver Surgery, Department of Pancreatic and Biliary Surgery	12
Department of Radiation Oncology	97 (including 1 Chinese visitors)	Department of Nuclear Medicine	6
Department of Gynecologic Oncology	24	Department of Medicine Laboratory	3
Department of Colorectal Surgery	9	Department of Clinical Research	б
Department of Urology	16	Department of Clinical Nutrition	5
Department of Medical Oncology	64	Department of Anesthesiology and Operating Theatre	8
Department of Breast Oncology	6	Department of Endoscopy	19
Department of Head and Neck Surgery	6	Department of Pediatrics Oncology	1
Department of Gastric and Pancreatic Surgery	7 (including 1 Chinese visitors)	Department of Neurosurgery	8
Department of Thoracic Surgery	б	Biotherapy Center	1
Department of Medical Imaging	14	Department of Hematological Oncology	4
Department of Minimally Invasive Therapy	45	Intensive Care Unit	4
Bone and Soft Tissue Surgery	2	Oncology Warehouse	1
Department of Nasopharyngeal Carcinoma	3	Department of Pharmacy	10
Department of Ultrasound and Electrocardiogram	12	Department of Blood Transfusion	3
Department of Molecular Diagnosis	8	Total	428

2020 Distribution of Overseas Postgraduate and Advanced Students

Overseas Postgraduate Students in 2020

6 Doctoral students, 4 Master's students					



Postgraduate Students from Hong Kong, Macao & Taiwan in 2020

Administrative Region	No. Students				
Hong Kong, China	4				
Taiwan, China	1				
Total	5				
6 Doctoral students, 2 Master's students					



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Advanced Students in 2020

Provinces and Cities	No.	Provinces and Cities	No.	Provinces and Cities	No.	
Chongqing	4	Jiangxi	16	Gansu	6	
Zhejiang	3	Jilin	2	Fujian	26	
Yunnan	6	Hunan	23	Macao	1	
Xinjiang	13	Hubei	10	Anhui	3	
Sichuan	14	Henan	19			
Shanghai	1	Hainan	7	Total: 421		
Shaanxi	6	Guizhou	9			
Shandong	3	Guangxi	32			
Qinghai	2	Guangdong	215			

INTERNATIONAL COMMUNICATIONS

OVERVIEW

In 2020, the Center launched multi-level academic exchange activities in a range of different fields, completing the tasks of international academic exchanges assigned by Sun Yat-sen University and Guangdong Province. The development of international collaborative projects serves to improve the Center's cooperative training of high-level healthcare and research team with its partners, and to benefit the comprehensive optimization of the Center's medical education. The multi-level cooperation in various fields significantly promoted the academic exchanges and communication between the Center with its international peers, providing the Center with a greater international perspective and enhancing its international reputation and academic influence in oncology research and treatment.

Overview of International Partners





The Chinese Conference on Oncology China-Australia Bilateral Academic Conference on Oncology



IMPORTANT INTERNATIONAL EVENTS

The China-Australia Bilateral Academic Conference on Oncology, one of the seven themes of the CCO, was held in Guangzhou on the morning of November 15, 2020. Oncology specialists from the Chinese Anti-Cancer Association, CACA-Australia, and Australia's Icon Group attended the conference in person or remotely. The latest hot issues in the diagnosis and treatment in medical oncology and surgery, radiotherapy and nursing were discussed during the conference. The conference has strengthened academic exchanges between oncologists of China and Australia and international cooperation was thereby deepened and expanded.



On the afternoon of November 14, 2020, the ASEAN International Forum on Integrative Oncology was officially held. As one of the international special sessions of the CCO 2020, experts and scholars in the field of oncology from ASEAN countries and China were invited to attend the forum in person or via the Internet and share their knowledge on the new progress of integrative oncology, precision oncology, and minimally invasive approaches in oncology treatment. The forum has greatly promoted exchanges and cooperation between China and ASEAN countries in the prevention and treatment of cancer.



Experts held online discussions at the Fourth International Head & Neck Tumor Symposium The Fourth International Head & Neck Tumor Symposium (online session) was held on December 12, 2020. Renowned experts from home and abroad specializing in radiotherapy, chemotherapy, immunotherapy, and basic and clinical research for head and neck tumors were invited to exchange ideas on multiple topics including the new progress in basic and clinical research, comprehensive treatment strategies, clinical experiments of medications, immunotherapy of head and neck tumors, especially the research progress and comprehensive treatment of nasopharyngeal carcinoma (NPC), which has effectively promoted the medical skill-level for head and neck tumors.

Specialists from SYSUCC invited to deliver key international lectures

Time	Name of International Conference	Topic of the presentation/ thesis	Speaker	Department
December 12, 2020	The Fourth International Head & Neck Tumor Symposium	Treatment strategy of locally-advanced nasopharyngeal carcinoma	Ma Jun	Department of Radiation Oncology
June 1, 2020	Annual Meeting of American Society of Clinical Oncology (ASCO)	Is There an Ideal Chemoradiation Treatment Strategy for NPC?	Ma Jun	Department of Radiation Oncology
November 20-22, 2020	Annual Meeting of European Society for Medical Oncology (ESMO) Asia 2020	Optimized chemoradiation treatment strategy for the management of locally advanced nasopharyngeal carcinoma	Ma Jun	Department of Radiation Oncology
June 12-16, 2020	Annual Meeting of the American Association of Physicists in Medicine, Canada	MR-Based Synthetic CT Images Generated Using Generative Adversarial Networks for Nasopharyngeal Carcinoma Radiotherapy Treatment Planning	Peng Yinglin	Department of Radiation Oncology
October 25-28, 2020	Annual Meeting of the American Society for Radiation Oncology (ASTRO)	MR-based Synthetic CT Images Generated Using Generative Adversarial Networks for Nasopharyngeal Carcinoma Radiotherapy Treatment Planning	Peng Yinglin	Department of Radiation Oncology
October 25-28, 2020	Annual Meeting of the American Society for Radiation Oncology (ASTRO)	Convolutional Neural Network Learning from Combinations of RT Dose Distribution, CT and PET Improves Predicting Locoregional Recurrence for Head and Neck Cancer	Li Yongbao	Department of Radiation Oncology
October 25-28, 2020	Annual Meeting of the American Society for Radiation Oncology (ASTRO)	The Prognostic Value of Radiologic Extranodal Extension Determined by MR Imaging in Nasopharyngeal Carcinoma: Implications for Future Editions of N-staging Systems	Mao Yanping	Department of Radiation Oncology
October 25-28, 2020	Annual Meeting of the American Society for Radiation Oncology (ASTRO)	A genotype signature for predicting pathologic complete response in locally advanced rectal cancer	Xiao Weiwei	Department of Radiation Oncology
October 25-28, 2020	Annual Meeting of the American Urological Association (AUA)	Adjuvant Intra-arterial Chemotherapy Following Surgery In Treating Patients With Locally Advanced Bladder Cancer: A China, prospective, Multicenter, randomized Phase III Trial	Liu Zhuowei,	Department of Urology
June 1, 2020	Annual Meeting of the American Society of Clinical Oncology (ASCO)	Comparison of modalities of postoperative adjuvant treatment for early cervical cancer: results of a phase III multicenter, randomized controlled study	Liu Jihong	Department of Gynecologic Oncology
March 28, 2020	The SGO 2020 Annual Meeting on Women's Cancer	Study on the treatment of advanced recurrent cervical cancer with camrelizumab combined with apatinib	Huang Xin	Department of Gynecologic Oncology
September 20, 2020	The 45th European Society for Medical Oncology (ESMO)	Apatinib plus gefitinib versus placebo plus gefitinib in first-line treatment of advanced epidermal growth factor receptor mutant non-small cell lung cancer: a multicenter, randomized, double-blind phase III trial.	Zhang Li	Department of Medical Oncology
August 8, 2020	Conference on Lung Cancer (WCLC 2020)	Gratifying results of domestic tumor immunotherapy combined with chemotherapy in the treatment of first-line non-squamous non-small cell lung cancer	Zhang Li	Department of Medical Oncology

Time	Name of International Conference	Topic of the presentation/ thesis	Speaker	Department
June 1, 2020	Annual Meeting of the American Society of Clinical Oncology (ASCO)	Results of a phase III clinical study of capecitabine rhythm maintenance after standard treatment for operable triple negative breast cancer	Yuan Zhongyu	Department of Medical Oncology
June 1, 2020	Annual Meeting of the American Society of Clinical Oncology (ASCO)	Predictive model of ctDNA detection rate in cerebrospinal fluid with brain metastases from lung cancer	Chen Likun	Department of Medical Oncology
September 20, 2020	The 45 th European Society for Medical Oncology (ESMO)	Hepatic arterial infusion chemotherapy with oxaliplatin, fluorouracil, and calcium folinate versus transarterial chemoembolization in unresectable hepatocellular carcinoma: a randomized phase III trial	Shi Ming	Department of Liver Surgery
October 14, 2020	The 52 nd Annual Meeting of the International Society of Pediatric Oncology, 2020, Canada	Comparison of the efficacy and safety of R-CHOP/CHOP regimen and modified NHL-BFM-90/95 regimen to diffuse large B-cell lymphoma in children and adolescents.	Zhang Yizhuo	Department of ediatrics Oncology
August 27, 2020	EGM Melanoma Virtual Speaker Tour 2020, Switzerland	Discussion on treatment of melanoma	Wen Xizhi	Biotherapy Center
September 17, 2020	China-Japan Joint Symposium (The 58 th Annual Meeting of the Biophysical Society of Japan), Japan	Towards the mechanism of mitochondrial outer membrane fusion	Gao Song	Department of Experimental Research

REVIEW OF 2020

2020 CHINESE CONFERENCE ON ONCOLOGY

The 2020 Chinese Conference on Oncology (CCO) was successfully held in Guangzhou from November 12 to 15, 2020, and was sponsored by the Chinese Anti-Cancer Association and organized by our Center and the Guangdong Anti-Cancer Association. The conference was postponed due to the outbreak of COVID-19. With high requirements, a tight schedule and heavy responsibilities, the Center formed 20 conference working groups and summoned more than 1/3 of the hospital's staff to work collectively for 108 days. Together, they raced against time to create the "10 highlights" and present a conference with "five characteristics". In addition, they made innovations on 12 dimensions and finally brought us a conference wholeheartedly organized and of wisdom.





24 academicians of the Chinese Academy of Sciences and the Chinese Academy of Engineering, as well as nearly 2,800 well-known experts and scholars, were present at the CCO. There was one main venue and eight themed venues, all of which gathered intellect at the frontier of discipline development and contributed to the building of a healthy China. 502 media outlets participated in the news coverage resulting in 4,717 news reports which were read by more than 110 million people. carrying out academic exchanges, and sharing the latest achievements and progress in specialized departments, diseases, treatment and research. To ensure public safety in the post-epidemic period, the conference spent great effort in creating academic live streaming. A record high 30 conference venues were broadcast live so that more experts, scholars and colleagues could participate in the event.



The conference received a total of 13,536 manuscripts , including 6,402 youth outstanding papers. After the experts' review, 100 outstanding papers were awarded, including five papers winning the first prize, 15 papers the second prize, 30 papers the third prize, and 50 papers winning the award of excellence. 140 speeches were delivered at themed venues; there were 3,426 poster exchanges; and 11,358 papers compiled.

November 14th marked the opening ceremony of the 2020 China Oncology Congress, in which academician Fan Daiming, chairman of the congress, delivered a speech, and President Xu Ruihua, executive chairman of the congress, presided over the ceremony.

The nine keynote speakers were selected from hundreds of oncology experts across the country through several rounds of selection. Their speeches focused on cutting-edge topics and integrated wisdom, covering basic oncology research, clinical transformation, precision diagnosis and treatment, providing an excellent academic feast for the conference.

In the specially designed medical humanities session, Mr. Zhu Shunyan, CEO of Ali Health, Mr. Jiang Changjian, a famous media personality, were invited to have a cross-boundary dialogue with academician Fan Daiming, president of the conference. The content of their dialogue ranged from Al big data to medical and industrial integration, and from intelligent healthcare to the Internet + healthcare. Together, they explored the new development, trends and breakthroughs in the future of healthcare.

The conference paid attention to new ideas, new intelligence, new information, and new discoveries, with a total of 80 professional committees and 109 sub-sessions focusing on basic and clinical research, promoting the transformation of scientific and technological achievements,

carrying out academic exchanges, and sharing the latest achievements and progress in specialized departments, diseases, treatment and research. To ensure public safety in the post-epidemic period, the conference spent great effort in creating academic live streaming. A record high 30 conference venues were broadcast live so that more experts, scholars and colleagues could participate in the event.

During the "Walk Together on the Same Day" activity, anti-cancer specialists and cancer survivors combined "brisk walking" and "interactive painting" to draw a "tree of life" full of vitality and hope with their steps, and to convey positive energy and hope for cancer prevention.



With the theme of "Survival in Desperation", China's Conference on the Popularization of Oncology invited Fan Daiming, director of the Chinese Anti-Cancer Association, Yin Ye, CEO of BGI, Qin Bo, director of the documentary Life Matters, and Li Yunling, a cancer survivor as guest speakers. Hosted by Wu Xiaoliang, a well-known media personality, it presented a medical and humanistic speech in search of the essence of life, through which the connotation of survival in desperation was delivered, life was perceived, and love conveyed.

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From September to November, the 2020 CCO series of science popularization activities saw the launch of the "Six Events" science popularization project and organized the science popularization campaign, holding more than 100 events covering more than 100 cities and 1 million people, with hundreds of doctors participating and all for the public. During the campaign, the Center set up eight touring science popularization teams, and summoned 559 medical personnel across 101 cities and counties in 26 provinces to carry out 136 science popularization activities about topics that concern people the most.

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Technological Innovation



Technological innovation: the first in the world to use metronomic chemotherapy as maintainence treatment after the standard treatment of triple-negative breast cancer

Adhering to the "Four Orientations" and taking the "Three Major Constructions" as the starting point, the field of scientific research has yielded substantial achievements. In the Nature Index published in 2020, the Center ranked 7th among cancer centers in the world and 1st among cancer hospitals in China. In the latest "Science and Technology Evaluation Metrics of Chinese Hospitals" issued by the Chinese Academy of Medical Sciences, the Center ranks second in oncology nationally and first in scientific and technological output among oncology hospitals.

Significant progress has been made in clinical, basic and translational research:

The research of Yuan Zhongyu's team reduced the risk of recurrence of early triple-negative breast cancer by more than one-third, and was the first Chinese breast cancer research to be published by JAMA.

Huang Xin's team made significant progress in the treatment of recurrent and refractory cervical cancer with camrelizumab combined with apatinib. Chen Mingyuan's team made significant progress in the phase III clinical study of local radiotherapy for newly diagnosed distant metastatic nasopharyngeal cancer. Zhang Li's team made great progress in the multi-center marketing study of ensartinib hydrochloride for ALK positive lung cancer in China. The research has improved the survival rate of the patients and provided new and effective treatment schemes for advanced relapsed and drug-resistant tumors.

Kang Tiebang's team discovered a new external secretion pathway and new targets for osteosarcoma transfer; Bei Jinxin's team found the genetic susceptibility to extranodal NK/T cell lymphoma; Xu Ruihua's team revealed the mechanism of VDR in vitamin D inhibiting colorectal cancer stem cells and the important pathogenic mechanism of NK/T lymphoma, osteosarcoma, and colorectal cancer, putting forward a potential cancer prevention and control strategy.

Zeng Musheng's team interpreted the capsid structure of EB virus and fully presented the cell components at the single-cell level of nasopharyngeal carcinoma in the tumor microenvironment and the expression map of EBV; Ma Jun's team mapped the tumor microenvironment of nasopharyngeal carcinoma; Xu Ruihua's team established a diagnostic model and prognostic prediction model of ctDNA methylation in colorectal cancer, all of which laid a foundation for the accurate diagnosis and treatment of nasopharyngeal carcinoma and colorectal cancer.

In 2020, the number of projects from the Center approved by the National Natural Science Foundation of China and the total amount of funds reached a record high, with a total of 102 approved projects and direct funding of 51.54 million yuan, among which there are four key projects and one project of the Excellent Young Scientists Fund.

Professor Ma Jun led a team to systematically improve the stage standard of nasopharyngeal cancer, established the standard of normal organ protection for radiotherapy of nasopharyngeal cancer, and continuously optimized the mode of radiotherapy and chemotherapy for nasopharyngeal cancer, which won the Wu Jieping Pharmaceutical Innovation Award in 2020. The achievement of "Establishment and Application of Accurate Diagnosis and Treatment of Nasopharyngeal Cancer" won tfirst prize at the 2020 Science Research Famous Achievement Awards in Higher Institutions.

"A series of research on innovative foundation and clinical application of malignant lymphoma in China" by Huang Huigiang's team won the first prize at the 2020 Science and Technology Awards of the Chinese Anti-Cancer Association.

Professor Xu Ruihua was awarded the Scientific and Technological Achievement Transformation Award of WuXi AppTec Life Sciences and Chemistry Awards for his outstanding achievements in the treatment of gastrointestinal carcinoma.

The impact factor of Cancer Communications (CC), a journal sponsored by the Center, reached a record high of 5.627, ranking 49th out of 244 oncology journals and becoming a Q1 journal.

The Huangpu Campus





In June, the Huangpu Campus Laboratory of the State Key Laboratory of Oncology in South China was officially put into operation. With a total area of more than 12,200 square meters, the Huangpu Campus is designed to accommodate nearly 50 PI groups. Currently, there are 10 principal investigators working at the campus.

The departments of Head and Neck surgery, Thoracic Surgery, Pancreaticobiliary Surgery, Colorectal Surgery, Gastric Surgery, Urology, Breast Cancer, Medical Oncology, Radiation Oncology, Nasopharyngeal Carcinoma, Hematological Oncology, Bone and Soft Tissue Surgery, Invasive Therapy, and others are housed there to meet the needs of different cancer patients along with a logistics service center to help provide a greater and more efficient public medical platform.



2020 is a year to build on past achievements and forge ahead. A year in which a new multi-campus pattern has taken shape. With people's life and health firmly in mind, the Center attaches great importance to the Huangpu Campus as the Livelihood Project and has actively promoted its construction.

Located in the south of the Sino-Singapore Guangzhou Knowledge City, the Huangpu Campus covers a floor area of 105,000 square meters and has 633 beds in its first-phase construction. It is a designated unit of Guangzhou Medical Insurance and a cancer hospital managed by Sun Yat-Sen University Cancer Center. The trial operation of the Huangpu Campus has now entered the countdown stage.



Vice-President Professor Sun Ying and staff celebrate the arrival of the first batch of staff at Huangpu Campus

