Continuous Innovation to Take the Lead in Precision Radiation Medicine

持续创新，引领精准放疗技术革新

—— Interview with Mr. Anming Gong, Executive Vice President of Elekta and China CEO

—— 访医科达执行副总裁兼中国区 CEO 龚安明先生

□记者　李 莉

全球医学放射治疗和神经外科领域的领先者——医科达，成立于 1972 年，总部位于瑞典斯德哥尔摩。是由发明了人类历史上第一款伽玛刀的瑞典神经外科教授创办，专注为全身肿瘤和脑部疾病提供放射治疗解决方案的国际化公司。秉承“专注，为生命全力以赴”，医科达通过医疗技术的持续创新，不断引领行业发展的新高度，致力于为全球用户提供精准、智能、高效的放射治疗解决方案和肿瘤信息管理系统，改善、延长及挽救患者生命。在医科达，有五分之一的员工从事研发工作。精准放疗领域，医科达过去五年研发总投资达 60 亿瑞典克朗。目前，医科达的业务范围涉及 120 多个国家和地区，先进技术和创新解决方案应用于全球 6,000 多家医疗机构，每天为超过 10 万名患者提供诊断和治疗服务。

医科达执行副总裁兼中国区 CEO 龚安明先生
Mr. Anming Gong, Executive Vice President of Elekta and China CEO

2018 年是改革开放 40 周年，医科达作为最早一批进驻中国市场的跨国公司，始终与中国改革开放与放疗事业共成长。1982 年，医科达带着全球最新的精准放疗技术来到中国，2008 年成立上海软件研发中心，目前，软件研发团队人数占全球研发团队的 30-40%，预计 2019 年底，这一比例将超过 50%，2013 年，在北京设立了集研发、生产、全球采购中心为一体的生产基地，是欧洲之外唯一放疗设备生产基地。2018 年 6 月，推出全球首台高场强磁共振放疗系统，与中国 5 家顶级放疗中心开展临床合作。近 40 年来，医科达积极发挥放疗抗癌行业领军者的作用，专注创新与本土化，服务中国医生与患者，是中国改革开放的亲历者与见证者。

拥有 30 多年医疗领域管理经验的龚安明先生，一直在推进中国肿瘤放疗行业的发展，希望能够为更多癌症患者带来更经济、更精准的放疗解决方案。在加入医科达之前，他任职于西门子（中国）有限公司医疗业务领域副总裁，2009 年加入医科达，后被正式任命为医科达全球执行副总裁、中国区首席执行官，负责中国市场的整体战略及业务增长。在加入公司的 10 年期间，龚安明总裁带领团队稳步发展，使医科达中国跃升为医科达全球第二大市场，并逐渐发展成为中国最具本土化和创新力的放疗公司。

医科达（北京）医疗器械有限公司
医科达全资子公司具备完整的 Elekta Synergy 等产品生产线，按照全球统一高标准的质量控制体系严格把控，以其高效的流通配送、周到的客户服务成为全球范围内具有强劲竞争力的集研发、生产、采购和服务等于一体的重要基地。

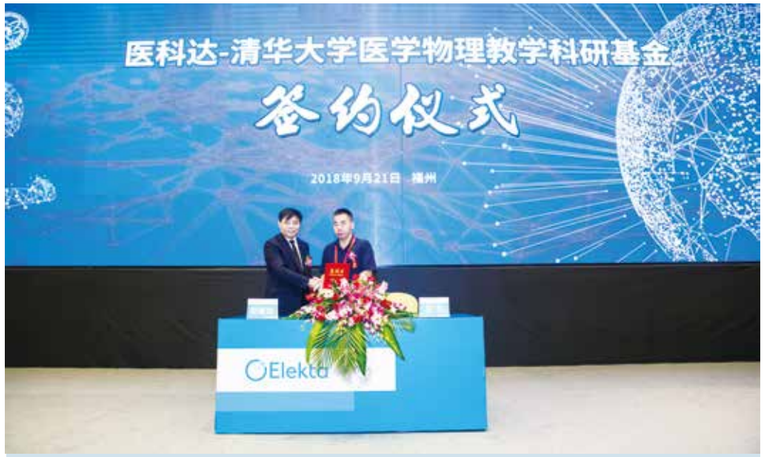
医科达（上海）科技有限公司
医科达全球软件研发创新的重要基地，通过与全球多个研发中心紧密合作，将完善可靠的医疗解决方案交付给全球用户。

医科达创新科技不仅代表了行业最高标准，更是引领着放疗行业的发展和进步。作为放疗行业的创新先驱与技术引领者，医科达一直肩负着推动中国抗癌事业发展的责任与使命，用不断创新的产品与专业的服务为中国放疗事业发展带来了新理念、新技术、新产品。作为展会放疗业的唯一参展商，医科达带着放疗领域最革命性的创新产品来到首届中国进口博览会，并于 2018 年 11 月 7 日，发布了全球首台高强磁共振放疗系统 Elekta Unity 与精准自适应伽玛刀 Leksell Gamma knife Icon，现场还展示了医科达新一代智能化放疗平台 Elekta Axesse 与智慧放疗解决方案，为中国患者带来更为个性化、精准、高效的放射治疗解决方案。龚安明总裁说：“医科达是创新型企业，研发新的产品、高精准的产品是我们的第一首要目标，几十年以来，行业重要新技术都是我们推出的。放疗是全球公认的肿瘤治疗有效方式之一，大约 60%-70% 的肿瘤患者在治疗过程中需要接受放疗，它可以最大程度的提高治疗疗效，保护健康组织。这次展会突出展示的三大创新领先产品，第一个产品，高场强磁共振放疗系统 Elekta Unity，对软组织成像清晰，能精准描画肿瘤边缘，最大程度的保护正常组织免受放射治疗的损伤。在治疗过程中，它使医生能够追踪并且评估肿瘤靶区，实时在线调整治疗方案，保证把癌症细胞尽可能杀死的同时尽最大限度的保护正常组织，在全球行业里绝对是革命性的产品，这次在进博会上引起很大的轰动。这是人类第一次在肿瘤放射治疗时，能够高分辨率地清晰显示和追踪肿瘤，并对治疗效果进行及时评价，调整个性化的治疗方案，从而为精准放疗建立了新标准。

学术交流，助力行业发展
为促进放射物理学术交流，传递前沿放射物理知识与技术，医科达积极参与并组织学术活动，更连续 13 年作为承办方，支持中国医学物理分会京津冀鲁晋豫地区放射物理专业组的学术会议，推进放疗技术和行业的蓬勃发展。

第二个产品，伽玛刀 Leksell Gamma knife Icon，是伽玛刀技术又一次里程碑式的提升，提高了治疗能力，更新了精确立体定向放射外科的理念，突破颅脑放射外科系统传统的疆界阻隔。特别是实现了精确无创的分次治疗，可从容应对较大的病灶。高效的同时费用比普通放疗还要低，疗效非常好。

第三个产品，是我们推出的一种智能化的放疗平台 Elekta Axesse，可以提供安全高精度的治疗及个性化的解决方案。既可以在治疗过程中能够知道肿瘤运动的轨迹，同时又可以采用最新人工智能方式在线设定治疗方案，还能够用人工智能的方式控制治疗



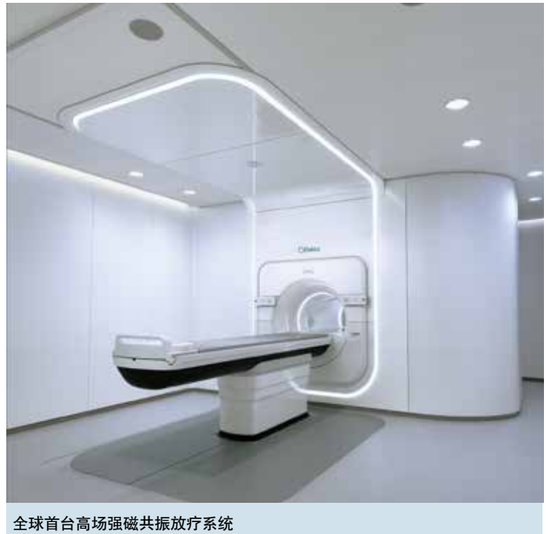
高校合作，加快学科发展
为支持专业化人才培养，为放疗临床工作输送更多中坚力量，医科达与国内著名高校开展了长期教学支持和合作，在武汉大学、清华大学、天津大学设置专项奖学金和教研基金，并通过多种临床应用培训与教学项目，帮助高校提高技术应用水平，加快学科发展。

的质量，这也是现在目前最流行的方式，为医生、护理师、患者提供了最佳的精准治疗方案。

医科达在中国的 30 年，正是中国改革开放蓬勃发展的 30 年，也是中国抗癌事业与放疗行业砥砺前行、创造生命奇迹的 30 年。作为中国抗癌事业的积极推动者，医科达不断将国际最高标准的临床解决方案和专业服务引入中国，并投入大量的研发力量，密切关注中国放疗事业和人才的发展，满足本土化医疗需求，推动中国放疗事业的创新和发展。医科达中国已在逐渐整合患者在放射治疗过程中不同设备、不同品牌产生的放射治疗相关数据和信息，完成了自有放疗云平台的搭建。不仅支持院内放疗流程数据共享，更可拓展至跨院、多中心、医联体的应用。

谈到未来的发展，龚安明先生说：“第一、为更好地整合资源，更好地服务中国用户，我们去年把中国的市场、销售、生产、服务、研发整合在一起，成立了医科达（中国）投资有限公司。目的是能够更加洞察中国用户需求，高效研发、生产更贴近中国市场的产品和服务，也为推动放射治疗在中国的推广和应用做出努力，第二，在中国大规模投资人工智能，大数据、云计算，实际上在全球，美国和中国是发展最快的，这方面我们会增加投入，加快人工智能等在放疗中的运用，促进医联体建设，提升基层医院的放疗水平。11 月 30 日，卫健委出台了一个宏伟的方案，到 2020 年底，规划配置直线加速器新增 1,396 台，伽玛射线立体定向放射治疗系统 146 台，我们现在要提供人工智能的解决方案、互联网的解决方案、云的方案、大数据的分析方案，为高端医院能够远程帮助下级医联体医院提供解决方案，真正开展精准治疗。我们现在已经为中国医学科学院肿瘤医院、中山大学肿瘤防治中心，复旦大学附属肿瘤医院这三家医院提供放疗网络整体解决方案。此外，医科达投入巨资完善售后服务体系，实现实时监测安装、测试和维护，从而最有效地为客户对产品的使用保驾护航。中国现在癌症的发病率持续在增加，医科达希望将先进技术和产品更快引入中国，帮助中国医生，更好服务中国患者。”第三，医科达将继续加大在放疗人才培养方面的力度，打造多层次立体化放疗人才培养体系和终身学习平台。不断增进与国内外知名大学和肿瘤中心的合作，包括清华大学、武汉大学、加拿大的多伦多大学、玛格丽特公主肿瘤中心、渥太华医院肿瘤中心，美国的约翰霍普金斯大学、托马斯杰弗逊大学，佛罗里达大学，德国海德堡大学曼海姆医学中心等，同时，将加大资助中国政府的医学培训项目、与国外知名肿瘤中心建立伙伴关系、定期与专业协会合作开展学术研讨会。助力培养更多高质量的医生、物理师等专业人才，尤其是为基层医院提供更多合格的放疗人才。

引领精准放疗技术革新、助力中国医疗改革、为中国放疗领域培养人才，是医科达进入中国以来不断践行的承诺。未来，医科达将会持续在华投入，继续扎根中国，为提升放疗临床应用水平做出贡献，以实际行动助力“健康中国 2030”战略目标的实现！



全球首台高场强磁共振放疗系统
Elekta Unity
创肿瘤治疗新规范

医科达执行副总裁兼中国区 CEO 龚安明先生
Mr. Anming Gong, Executive Vice President of Elekta and China CEO

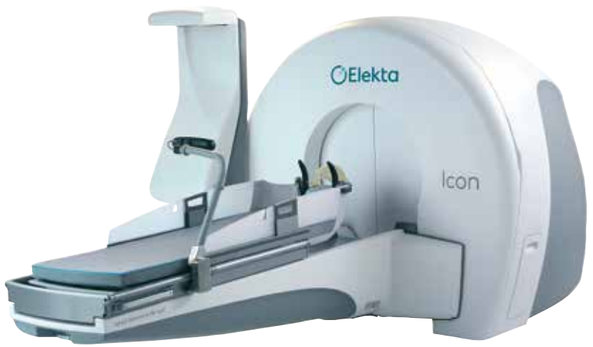
Elekta, a global leader in medical radiotherapy and neurosurgery, was incorporated in 1972 and headquartered in Stockholm, Sweden. Founded by the Swedish professor of neurosurgery who invented the first Gamma Knife in human history, it is an international company specializing in radiotherapy solutions for cancer care and brain disorders. Adhering to the philosophy of "Focus where it matters", Elekta continues to lead the industrial development through continuous innovation in radiation therapy, and is committed to globally accessible, efficient, intelligent and precise radiation therapy solutions and oncology information management system to improve, prolong and save patients' lives. One-fifth of the employees of Elekta are engaged in research and development. Elekta has invested a total of SEK 6 billion in precision radiation medicine R&D in the past five years. At present, the company's business covers over 120 countries and regions, with advanced technologies and innovative solutions applied in over 6,000 medical institutions around the world, providing diagnosis and treatment services for over 100,000 patients every day.

As one of the first multinational companies to enter Chinese market, Elekta has been closely related to the development of radiotherapy cause in China. In 1982, Elekta came to China with the world's latest precise radiotherapy technology. In 2008, its Shanghai software R&D center was established, with the number of software R&D staff accounting for 30-40% of its global total, and it is expected that this ratio will exceed 50% by the end of 2019. In 2013, Beijing saw the establishment of a radiotherapy equipment production base integrating R&D, production and global procurement center, the only one outside Europe. In June 2018, Elekta Unity, the world's first high field MR-linac, was launched, with which Elekta conducted clinical cooperation with five top radiotherapy centers in China. During the years, Elekta has been taking the lead in radiotherapy and cancer care industry, and focusing on innovation and localization to serve Chinese doctors and patients.

Mr. Anming Gong, with over 30 years of management experience in the medical field, has been making efforts to advance the radiotherapy treatment of tumors in China to bring a more economical and precise radiotherapy solution to more patients. He once served as the vice president for medical business of Siemens Medical Solutions, then joined Elekta in 2009, and was appointed as the global executive vice president and China CEO for the overall strategy and business growth in the Chinese market. During 10 years of service in Elekta, Gong shepherded his team to press forward, making China its second largest market across the world, and Elekta the most localized and innovative radiotherapy company in China.

The innovative technology of Elekta not only represents the highest standard but also leads the development and innovation of the radiotherapy industry. As an innovation pioneer and technology leader in radiotherapy industry, Elekta has always shouldered the responsibility and mission to promote China's cancer care industry. With innovative products and professional services, it has injected new ideas, technologies and products to the radiotherapy industry in China. As the sole exhibitor of radiotherapy industry on the First China International Import Expo, Elekta came with the most revolutionary innovative radiotherapy products, and on November 7, 2018, released the world's first high field MR-linac - Elekta Unity, a new non-invasive gamma knife - Leksell Gamma Knife Icon, a new generation intelligent digital radiotherapy platform - Elekta Axesse, and smart radiotherapy solutions, providing more personalized, precise and efficient radiotherapy solutions for Chinese patients. Gong said, "Elekta is an innovation-oriented company, with developing new and high-precise products as its first and foremost goal. For decades, it is Elekta

that has been introducing new key technologies to the industry. Radiation therapy is one of the most effective and recognized ways to treat cancers worldwide. About 60%-70% of cancer patients will receive radiotherapy treatment which can improve the therapeutic effect and protect healthy tissues to the maximum extent. Among the three innovative



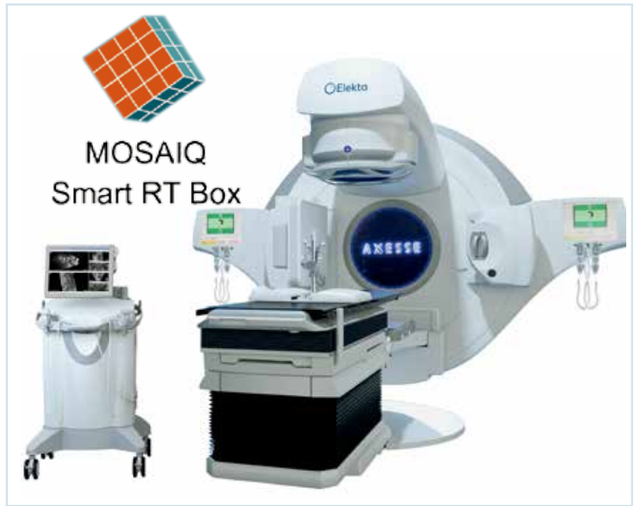
精准自适应伽玛刀
Leksell Gamma Knife® Icon ™
开启颅脑放射外科新纪元

products highlighted on the Expo, the first product is Elekta Unity, a high field MR-linac, which allows for clear imaging of soft tissue, accurate depicting of the tumor edge, and protecting normal tissue from damage by radiotherapy to the maximum. During treatment, it enables doctors to track and assess the target area of tumor, adjust therapeutic plans online in real time, ensure that cancer cells are killed as thoroughly as possible while protecting normal tissues to the utmost. As a revolutionary product in the industry worldwide, it made a splash at the Expo. It is the first time that humans are able to clearly display and track tumors at a high resolution during tumor radiotherapy treatment, to evaluate the therapeutic effect in a timely manner, and to adjust personalized therapeutic plans, establishing a new standard for precise radiotherapy.

The second product, Leksell Gamma Knife Icon, is another landmark of Gamma Knife technology in that it improves the therapeutic capacity, updates the concept of precise stereotactic radiosurgery, breaks through the traditional barrier of the brain radiosurgery system, and in particular, it realizes precise non-invasive fractionated radiotherapy to cope with a larger nidus more easily. In addition, it is more efficient and cost-effective than ordinary radiation therapy while providing sound therapeutic effect.

The third product is an intelligent radiotherapy platform that provides safe and high-precise treatment and personalized solutions. It allows not only the knowledge of tumor movement trajectory during the treatment, but also online therapeutic plan making and therapeutic quality control with the latest artificial intelligence, which is now the most popular method to provide doctors, nurses and patients with the most precise therapeutic plans.

The past 30 years during which Elekta stays in China has witnessed vigorous development of reform and opening up in China, and it is also a time when China's cancer care and radiotherapy industry continue to press forward and create life miracles. As an active promoter for China's cancer care cause, Elekta has continuously introduced clinical solutions and professional services of the highest international standard to China, and invested a lot in R&D, paid close attention to the development of China's radiotherapy industry and cultivation of talents, so as to meet local medical demands and promote the innovation and evolution of China's radiotherapy industry. Elekta China



新一代智能化放疗平台 Elekta Axesse ™
引入高精动态放射外科新时代

医科达进博会展台
医科达的创新产品受到中央及各省市领导、卫健委领导、中国各级医院院长，专业采购团、行业专家及媒体和大众的关注和青睐，展台成为医疗馆必去之地。

has gradually integrated the radiotherapy-related data and information generated by different devices and brands used by the patients in the course of radiotherapy treatment, and completed the erection of its own radiotherapy cloud platform, which not only supports sharing of radiotherapy process data within one hospital, but also across-hospital, multi-center, and medical association application. When talking about future development, Gong said, "First, we have just founded Elekta (China) Investment Co., Ltd. by integrating market, sales, production, service, and R&D in China. The product and service will be more closer to the Chinese users and market, which will also promote radiotherapy in basic-level hospitals; Second, we will make large-scale investment in artificial intelligence, big data, and cloud computing in China. Actually, such fields grow the fastest in the United States and China across the world. We will invest more in such fields to accelerate AI application in radiotherapy, promote the development of medical alliance and improve the radiotherapy level in basic-level hospitals. On November 30th, the Ministry of Public Health of China released an ambitious plan that the quantity of Linear accelerator and Gamma knife stereotactic radiotherapy system will be increased 1396 sets and 146 sets respectively by the end of 2020. Now we are trying to provide solutions based on artificial intelligence, Internet, cloud and big data, so that high-end hospitals could render remote assistance to lower-level hospitals from the medical association to truly implement precise therapy. Moreover, we will provide network systems for all the radiotherapy departments of the Cancer Institute and Hospital of the Chinese Academy of Medical Sciences, Sun Yat-sen University Cancer Center, and Cancer Hospital affiliated to Fudan University. In addition, Elekta has invested a vast sum in improving the after-sales service system for real-time monitoring of the installation, testing and maintenance, so as to provide support for its clients in a most effective way. With the incidence of cancer ever rising in China, Elekta hopes to introduce advanced technologies and products to China faster to help Chinese doctors and better serve Chinese patients."

Third, Elekta will continue to strengthen the cultivation of radiation therapy talents and provide multilevel training system and lifelong learning platform. Elekta will enhance cooperation with well-known universities and oncology centers in China and elsewhere, such as Tsinghua University, Wuhan University, University of Toronto, Princess Margaret Hospital, Ottawa Hospital, Johns Hopkins University, Thomas Jefferson University, University of Florida, Mannheim Medical Center Heidelberg University and so on. Meanwhile we will increase to fund the medical training programs of Chinese government, establish partnerships with well-known foreign cancer centers, and regularly conducting academic seminars with professional associations, aiming at cultivating high-quality physicians, physicists in radiotherapy and more qualified radiotherapy talents for basic-level hospitals.

It is the commitment of Elekta since its entering China to take the lead in technological innovation in precision radiation medicine, do its part in China's medical reform, and cultivate talents for China in the radiotherapy field. In the future, Elekta will continue investing and taking root in China to contribute to the improvement of clinical application level of radiotherapy, and do its bit to realize the strategic goal of "Healthy China 2030"!