



**Flanders**  
State of the Art



# HEALTH TECH

# IN CHINA

FLANDERS INVESTMENT & TRADE MARKET SURVEY



# CHINA HEALTH TECH

## Market Report

Publication date / October 2022



Flanders Investment & Trade FIT Guangzhou  
R&F Center Office  
Unit 2, 7th Floor  
10 Huaxia Lu  
Zhujiang New Town, Tianhe District,  
CN - 510623 Guangzhou  
China  
T +86 20 38 77 04 63  
[guangzhou@fitagency.com](mailto:guangzhou@fitagency.com)



# 1. INTRODUCTION

---

Although China, the second largest health care market in the world, is currently mainly perceived by the rest of the world in terms of its Zero Covid Strategy and difference with countries adopting a Living with the Virus strategy, the Chinese Health care system has made considerable progress over the last decades, as illustrated by China's life expectancy, which now exceeds that of the United States.

At the end of the previous century, China's pharmaceutical companies were focused on generics and Active Pharmaceutical Ingredients. Over the last decade however, a new generation of Chinese biotech and biopharma companies have been grown by Chinese returnees with a background in Western big pharma companies. These companies, focusing on therapeutical domains as oncology, immune diseases, chronic diseases, which have the highest incidence rate in China, are leveraging the high speed and low cost of research and clinical development on the Chinese market, to introduce biosimilars, best in class, first in class therapies for the entire world, with leading platforms in antibody, cell and gene therapy. With FDA approval as a key objective for their clinical pipeline, more companies are now also turning to Europe and eyeing EMA approval.

Flanders has been a pioneer in the collaboration with the Chinese pharmaceutical industry, through the creation of Xian Janssen Pharmaceutical Ltd. by Dr. Paul Janssen of Janssen Pharmaceutica (Johnson & Johnson) in 1985, which was one of the earliest multinational pharma companies to enter China after the economic reforms of the late seventies. Today, Flanders' successful biotech companies that are globalizing have also set their sights on the second largest health care market. Collaboration with the Chinese biopharma's for licensing, clinical development, manufacturing, and commercialization for the Chinese market is the best approach for success on this market and several companies are already in clinical development with a partner today.

China has been a global leader in IVD, testing equipment and health care consumables, but MedTech companies have also grown into sizeable players in medical imaging, and emerging domains such as surgical robotics and early cancer screening. Collaboration opportunities exist here as well for MedTech companies from Flanders, for example through accelerated registration tracks in medical pilot zones. Barco, a leading company from Flanders, is embedded in the China MedTech ecosystem as an OEM for high-end medical displays.

This report is intended to be a primer for Biotech, Medtech and Digital Health companies from Flanders to get an understanding of the China health care market, its opportunities and challenges, and is a starting point for these companies to further explore the market and potential partnerships in collaboration with the team of Flanders Investment & Trade in China.

While international travel restrictions are still in place under the Zero Covid Strategy, we are preparing for the opening up of the country and can use a number of key matchmaking events to bring together leading Health Tech players from China and Flanders, and pursue successful collaboration on the Chinese market.

At the end of the document we provide a list of reference documents for further reading and deep dive, which have been used as input sources for the completion of this market study.











Advice given to Multinational Corporations (MNC) to deal with the volume-based procurement include:

- Further optimize supply chains and control operating costs
- Create a diverse product portfolio and product differentiation strategy
- Medical device companies need to continue to increase R&D investment to improve technology and develop new products
- SME must cut prices to minimum profit margins to win VBP bid

The volume-based procurement strategy is a game changer for foreign companies, and has led to a focus on advanced technological products and therapies with limited domestic competition.

The **two-invoice system** was introduced in 2015 and is allowing two invoices at most to be issued when drugs are distributed between drug manufacturers and medical institutions. The system aims to greatly reduce the costs of pharmaceutical products and medical devices, by cutting out intermediaries.

## 2.5 TRADITIONAL CHINESE MEDICINE (TCM)

Driven by favorable national policies and increasing demand, the market size of the **traditional Chinese medicine** industry has shown a steady growth trend.

During the period from 2016 to 2020, the market size of China's traditional Chinese medicine industry continued to grow at a compound annual growth rate of 19.4%. By 2020, the market size of the traditional Chinese medicine industry reached 2825 billion RMB or 400 billion EUR. Statistics show that in the next five years, the market size of China's traditional Chinese medicine industry will maintain a compound annual growth rate of about 14.2% and continue to grow rapidly.

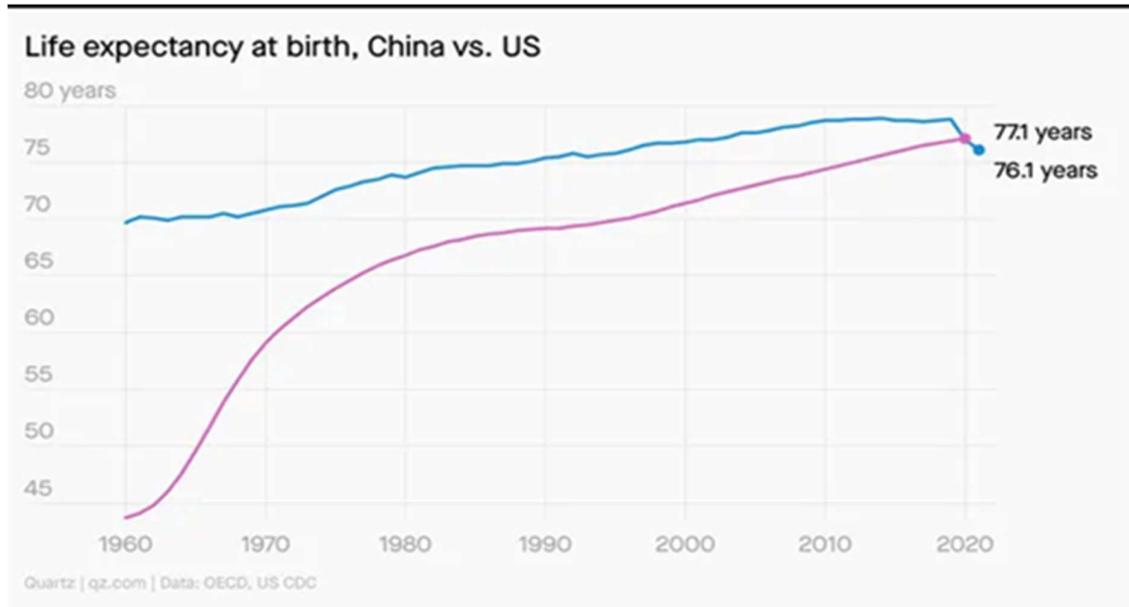
As the current living standard in China has improved and the income level of Chinese residents has continued to grow, the willingness to pay for medical care has increased, providing a solid economic foundation for consumption in the field of traditional Chinese medicine.



## 2.6 LIFE EXPECTANCY

According to the information that was released in September 2022, China's life expectancy of 77.1 years old is now higher than that of the US. The US life expectancy fell to 76.1 years old because of the outbreak of covid-19.

Statistics have shown that Chinese zero-covid strategy has prevented a staggering death rate, during the time that no vaccines were available. It remains to be seen how the longer term trend will look like in the coming years and this will depend on the further development of the health care system and impact on the treatment of prevalent chronic and age-related diseases.





A number of key players are given in the non-exhaustive list below:

- Grandpharma 远大医药  
<http://www.grandpharma.cn/>
- 3SBio 三生制药  
<https://www.3sbio.com/>
- Yangtze River Pharmaceutical Group 扬子江药业  
<https://www.yangzijiang.com/#/chinese/home/home>
- Kelun 科伦药业  
<https://www.kelun.com/Home.html>
- Chengdu Brilliant Pharmaceutical Co., Ltd. 倍特药业  
<http://btyy.com/#/>
- Jiangsu Hengrui Pharmaceuticals Co., Ltd. 恒瑞医药  
<https://www.hengrui.com/en/index.html>
- CSPC Pharmaceutical Group Co., Ltd. 石药集团  
<http://en.e-cspc.com/index.html>
- China Resources Pharmaceutical Group Limited (CR Pharma) 华润医药  
<https://www.crpharm.com/EN/>
- SJZ No.4 Pharmaceutical 石四药集团  
<http://www.sjzsiyao.com/#>
- Reyoung Pharmaceutical Co., Ltd. 瑞阳制药  
<http://reyoung.com/s.php/en>
- Qilu Pharmaceutical 齐鲁制药  
<http://en.qilu-pharma.com/>
- Easton Biopharmaceuticals 苑东生物  
<http://www.eastonpharma.cn/en/>
- Sino Biopharm 中国生物制药  
<http://www.sinobiopharm.com/en/>
- Tianyu Pharmaceutical 天宇股份  
<http://www.tianyupharm.com/index/en.aspx>

#### 4.1.2 Western multinational pharmaceutical companies

From 1980 to 2021, the scale of China's pharmaceutical market has grown from less than 8 billion yuan (1.16 billion EUR) to nearly 3 trillion yuan (435 billion EUR). Multinational pharmaceutical companies have gone through a period of rapid development in China.

**Xian Janssen Pharmaceutical Ltd.**, founded in 1985, is one of the earliest western multinational pharmaceutical companies to enter China after economic reforms started in the late 1970s. Over three decades, the company has steadily developed to become one of the leading pharmaceutical companies in China. Xian Janssen is well known in China and has developed into a brand representative for Flanders and Belgium's excellence in the pharma industry.



In recent years, China's pharmaceutical market has been growing, the sales volume of western big pharma in Chinese market contributes a lot to their growth. **The top 20 pharma companies in the world** have all invested and built factories in China.

However, leading pharmaceutical companies such as Roche, Pfizer, AstraZeneca, and Sanofi have not only divested non-core assets, but also made frequent and significant changes on structures in 2021. In fact, it is the Chinese volume-based procurement, medical insurance negotiation and the two-invoice system that have profoundly affected the Chinese pharmaceutical market. Western big pharmas had to adjust their strategies while observing the trend of China's policy reform. Besides, **Chinese innovative pharmaceutical companies** will become their next **most important competitors**.

Active western big pharma in China include:

- AstraZeneca
- Merck
- Roche Group
- Pfizer
- Janssen
- Sanofi
- Novartis
- Novo Nordisk
- Lilly

### 4.1.3 The Chinese private Biotech and Biopharma companies after 2000

China has witnessed a biotech boom over the past decade. The demand in China is growing for more innovative drugs to improve treatment outcomes that can match the rising standard of living in China. There are hundreds of China-originated biotechs, of which more than 50 had IPO in China, Hong Kong or the United States.

These biotech companies have an increased focus on innovative modalities and research and development, and the largest ones are scaling their biologics manufacturing capability in China, especially leading in monoclonal antibodies manufacturing with leading yield and cost effectiveness.

The leading companies have a pipeline in clinical development and some drugs already approved in China and the United States, and are increasingly looking to Europe for license out agreements or for their in-house clinical development.

These leading Chinese biopharma companies are the **ideal partners for biotech companies from Flanders to collaborate on the China market** through license agreements and collaboration for clinical development, manufacturing and commercialization in China.

As an example, **argenx** has established an exclusive license agreement with Zai Lab to develop and commercialize efgartigimod in Greater China. Zai Lab is recruiting Chinese patients to argenx's global registration trials.

**AI enabled Drug Discovery companies** have also originated from China, such as XtalPi, **Insilico Medicine** and AccutarBio.



Below is a non-exhaustive list of examples of private biotech and biopharma companies that have grown rapidly in the last decade and are potential partners for companies from Flanders.

**Zai Lab (<https://www.zailaboratory.com/>)**

Headquarters in Shanghai

Zai Lab is an innovative, research-based, commercial stage biopharmaceutical company based in China and the U.S. focused on bringing transformative medicines for oncology, autoimmune disorders, infectious diseases and neurological disorders to patients in China and around the world.

**Innovent (<https://www.innoventbio.com/>)**

Headquarters in Shanghai

Founded in 2011, Innovent is committed to the development, production and sales of innovative drugs for the treatment of major diseases such as tumors. A pipeline including 34 new drug varieties has been established, covering tumor, metabolic diseases, autoimmunity and other disease fields, of which 7 varieties have been selected for the national "Major New Drug Creation" project.

At present, Innovent has built a high-end biopharmaceutical industrialization base in accordance with the GMP standards of NMPA, US FDA and EU EMA. The industrialized production line has passed the GMP audit required by the partner International Pharmaceutical Group for industrialized production.

**Harbour Biomed (<https://www.harbourbiomed.com/>)**

Headquarters: Shanghai

Harbour BioMed is a global clinical-stage biopharmaceutical company committed to the discovery, development and commercialization of novel antibody therapeutics in oncology and immunological disease areas to address unmet patient's needs.

Harbour Biomed is building a robust pipeline with the integrated Harbour antibody platform, that enable Harbour to develop highly differentiated antibodies against various disease targets with great potency and safety profiles. Their proprietary Harbour Mice® generate fully human monoclonal antibodies in the classical two heavy and two light chain (H2L2) format, as well as heavy chain only (HCAb) format.

**JunShi Biosciences / TopAlliance (<https://www.junshipharma.com/en/Index.html>)**

Headquarters: Shanghai

Junshi Biosciences is an innovation-driven biopharmaceutical company which is dedicated to the discovery and development of innovative drugs and their clinical research and commercialization on a global scale.

Based on the core platform technology of protein engineering, Junshi Biosciences stands at the frontier of R&D of macromolecular drugs. With distinguished capability of innovative drug discovery, advanced biotechnological R&D, large-scale production capacity on the full industry chain and rapidly expanding drug candidate portfolio of tremendous market potential, Junshi









Examples of leading Chinese IVD companies:

- Mindray (Chinese: 迈瑞医疗)  
<https://www.mindray.com/>
- Wondfo Biotech (Chinese: 万孚生物)
- KHB KeHua Bio Engineering (Chinese: 科华生物)
- Autobio (Chinese: 安图生物)  
<https://en.autobio.com.cn/#>
- Maccura Biotechnology (Chinese: 迈克生物)  
<https://www.maccura.com/en/about/index.html>
- Vazyme 诺唯赞  
<https://www.vazymebiotech.com/>
- Dian Diagnostics 迪安诊断  
<http://www.dazd.cn/>

Examples of leading NGS (Next Generation Sequencing) companies:

- BGI 华大基因  
[www.genomics.cn/](http://www.genomics.cn/)
- Daan Gene 达安基因  
<https://www.daangene.com/>
- Novogene 诺禾致源  
<https://www.novogene.com/>
- Genetron  
<https://en.genetronhealth.com/>
- Biochain  
<https://www.biochain.com/>

### 4.2.3 China digital health eco-system

“Internet + Health care” has been a Chinese government-led initiative since 2018 which is to facilitate medical practice supported by digital tools. The central government has issued policy and laws to support the digital transformation of China’s health care system. Especially during the COVID-19 outbreak, China’s response to it has been the widespread use of the medical AI, medical robots and mobile apps for medical information and services.

As a result of this, major Digital Tech players such as Alibaba, Tencent, JingDong, Ping An Technology and ByteDance have launched and listed stand-alone Health businesses with a focus on online consultation, online pharmacies and even networks of private clinics and test centres.



#### 4.2.3.1 Online health care and private clinics: Ping An, Lilac Garden, Tencent, ByteDance

**Ping An Good Doctor**, the first pillar of Ping An's health care strategy, is a very popular online health care services portal in China, for 24/7 online consultations, health management, prescriptions, second medical opinions and drug delivery. As of December 31, 2020, Ping An Good Doctor had 373 million users and partnered with more than 3,700 hospitals and 151,000 pharmacies.

**Lilac Garden** (DXY) is a leading digital health care technology company in China. It connects doctors, researchers, patients, hospitals, insurance companies and biopharmaceutical companies via professional and authoritative content sharing and interaction, medical data accumulation and digital medical services.

**Tencent Cloud Doctor** is a patient management product of Tencent that mainly serves doctors. Users have access to it via WeChat mini-program.

**ByteDance**, the parent company of TikTok, established a department dedicated to the big health business, renamed the original Toutiao Health to an independent brand "Xiaohe Medical", and released an App, which officially entered the online medical industry. Xiaohe Medical App is embedded with services such as online consultation, public hospital inquiry, and drug purchase. Recently, ByteDance acquired Amcare Health care for ¥10bn (US\$1.48bn). Amcare Health care is a professional women's and children's hospital for middle and high-end customers in China. In 2020, Amcare Health care obtained a government license for in-vitro fertilization operations by acquiring a Beijing hospital.

#### 4.2.3.2 Online pharmacies and secure supply chain: Alibaba, JD Health

**Ali Health** is one of the companies invested and controlled by Alibaba Group. As of September 2019, Ali Health Pharmacy has launched more than 60,000 products in 22 countries and regions and cooperated with nearly 3,000 brands. The product range covers OTC drugs, health supplements, adult products, medical devices, contact lenses, beauty products, personal care, mother and baby, and other categories, covering health solutions for different age groups from infants to the elderly.

**JD Health Pharmacy** is the first large-scale comprehensive Internet e-commerce platform officially launched by JD.com to carry out self-operated drug retail business. From the initial pharmaceutical retail business, it has grown into a highly influential online and offline integrated pharmaceutical retail and marketing platform in the industry.







## 6. CHALLENGES AND OPPORTUNITIES FOR HEALTH TECH COMPANIES FROM FLANDERS

---

Given the context we have outlined in this report, **the health care market in China continues to have high potential** as the second largest health care market in the world with double digit growth: there is a middle class of 300 million Chinese with need for advanced health care and the Chinese government wants to continue to attract first in class, best in class drugs and therapies as well as advanced medical equipment from abroad. Health Technology is not in the crosshairs of the technology war between the United States and China (yet).

But it is also a **difficult market which presents challenges** in terms of increasingly capable **domestic competitors** that may receive preferential treatment, and government policies steering towards health care affordability and **price reduction** such as Volume-Based Procurement and the Two-Invoice System.

**Registration of trademarks and patents** is key and should be started as soon as possible, given the first-to-file principle in China. This can be done as part of an international patent registration procedure or a local patent registration procedure in China.

Price competition with domestic players is a strategy that is difficult to win for foreign companies, therefore companies should target the China market with **innovative products** that have not a direct competitor in China with a product of the same quality or efficacy and address an unmet need in the Chinese market.

The interest in the market can be checked through match-making with partners with pipeline in the same therapeutic domain or through KOLs.

### 6.1 COMPANIES WITH CLASS I MEDICAL DEVICES

Companies with Class I medical devices face the easiest pathway into the Chinese market, as they can enter in a distribution agreement with a local partner after registration of the device.

Prior to finding the right partner, product market fit in China can be tested through exposure to distributors, key opinion leaders and hospitals at one of the leading fairs such as China Medical Equipment Fair, participate in matching events organized by Medical Pilot Zones. Face to face meetings at international or domestic conferences with the presence of Key Opinion Leaders in the relevant therapeutic domain have been critical in the past to gauge interest from China, and will return once Covid zero travel restrictions are lifted.

Choosing the right partner is key, and therefore it is recommended to evaluate several candidates, perform due diligence, and monitor the distributor performance carefully and change course with a different partner if needed.

When sales pick-up, they can set up a wholly owned subsidiary, hire a local business development representative to manage the relationship with the distributor and manage local business development and marketing.



## 6.2 MEDTECH AND IVD COMPANIES

Companies with Class II and Class III devices need to go through a lengthy process of clinical trials. Therefore, they need to follow the same approach as described above, but also partner with right expertise for clinical development and commercialization in China. Apart from taking ownership of the clinical trials, certification process and the interaction with the provincial level or national level authorities, the partner should also bring their expertise with the state of the technology of domestic players and evolving policies such as centralized procurement extension to broader product categories.

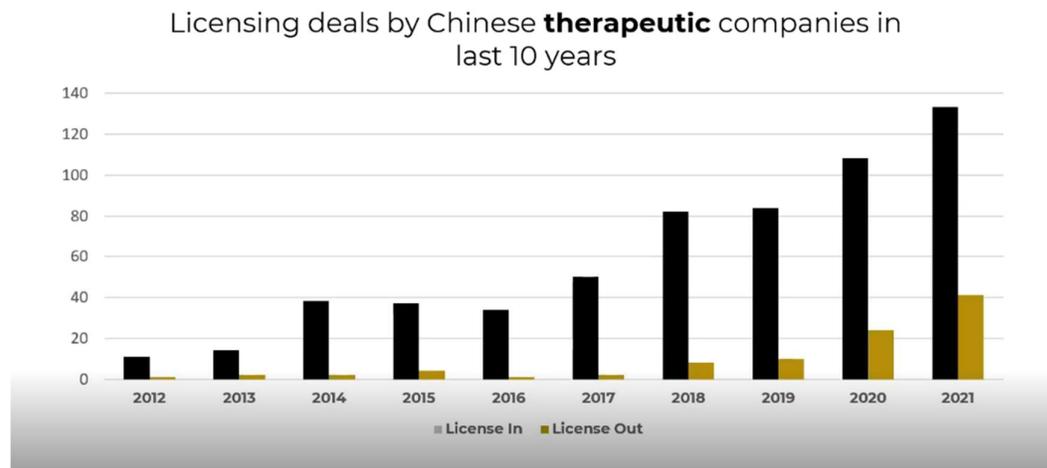
A potential pathway is to set up a **joint venture with a local partner**, where the JV takes responsibility for both clinical development and commercialization in China.

**Starting to commercialize before registration** is possible in the **Boao Lecheng Medical Pilot Zone** on Hainan Island for products that have already obtained CE or FDA approval. Data from usage of the devices in Hainan can then be used as real-world evidence supporting the clinical trials in China.

## 6.3 BIOTECH COMPANIES

Access to scientific and clinical Key Opinion Leaders in China and international conferences specialized in relevant therapeutic areas and involved in clinical development is an important step to get exposure and interest from the Chinese market.

On the other hand, leading Chinese biotech and biopharma companies with a global expansion strategy, are actively looking to extend their pipeline for the Chinese market or to license innovative technology platforms. As shown by the chart below by Agio Capital, both license-in and license-out deals by Chinese therapeutic companies have been increasing year by year, with the **licensing in technology from foreign biotech companies rising** steeply over the last few years.



Partnering forums in China and abroad are available to meet these Chinese counterparts and pitch the product, actively supported by FIT. Collaboration can be set up in the form of a licensing agreement with commercial rights for the Chinese market, or the creation of a joint venture for the clinical development, manufacturing and commercialization in China, and can also be combined with equity raising of the parent company by the international venture arm of the Chinese biopharma.

The Chinese biopharma bring their relationships and access to local CRO, CDMO, IP/legal companies, as well as the specific market knowledge related to pricing, health insurance reimbursement and public procurement policies.





exclusive license agreement for the development and commercialization of efgartigimod in Greater China, including mainland China, Hong Kong, Taiwan and Macau.

Under the terms of the agreement, Zai Lab obtained the exclusive right to develop and commercialize efgartigimod in Greater China. Zai Lab will recruit Chinese patients to argenx's global registrational trials for the development of efgartigimod. Additionally, this agreement is expected to allow argenx to accelerate efgartigimod development by initiating multiple Phase 2 proof-of-concept trials in new autoimmune indications.

**eTheRNA immunotherapies NV** has entered into a strategic cooperation and product license agreement with China Grand Pharmaceutical & Health care Holdings Ltd to establish a new joint venture company, Nanjing AuroRNA Biotech Co., Ltd. ("AuroRNA Biotech") in Mainland China to deploy eTheRNA's proprietary mRNA technology for pharmaceutical research and development and production in the Greater China Region.

**FEOPS** established an exclusive strategic cooperation with Venus Medtech to introduce CE-marked FEops HEART guide technology in China, which combines unique digital twins and AI-enabled anatomical analysis technologies, and set up pre-procedure planning through pre-procedure image analysis, which plays a significant role in the training, development and promotion of TAVR procedures.

## 8. HOW FLANDERS INVESTMENT AND TRADE CAN HELP

---

The team of the **Science & Technology Office of Flanders in China** have developed and continue to develop relationships with the leading Chinese biotech, biopharma, IVD, medical device, CRO and CDMO companies.

These are potential investors in Flanders to establish regional HQ, sales and distribution, R&D, manufacturing and regulatory operations in Flanders.

These leading Chinese companies are also potential partners for Biotech and Medtech companies from Flanders to enter the Chinese market, through collaboration for registration and clinical development, local manufacturing and commercialization or in-licensing or out-licensing agreements.

The team of FIT is present at the most important matching forums and conferences and can help with on-site, hybrid or virtual matchmaking.

Next to the conferences, the team of FIT can also help with 1-1 connections with targeted KOLs and partners.

A physical Health Tech mission for Flanders Health Tech companies is planned once zero COVID travel restrictions are lifted.









[IVD 上市公司已达 75 家，还有 12 家在排队！|ivdlipo|丽珠集团|港交所\\_网易订阅 \(163.com\)](#)

[国产医疗器械上市公司 Top15，群雄逐鹿！|群雄逐鹿|Top15|医疗器械|骨科|增长|营收|健康界 \(cn-health care.com\)](#)

[China's health care market is expected to grow from RMB6 trillion in 2019 to RMB16 trillion in 2030 \(prnewswire.com\)](#)

[Volume-Based Procurement in Mainland China: Key trends and planning future strategies - Clarivate](#)

[How volume-based procurement is redefining medtech go-to-market models in China \(zs.com\)](#)

[全球市场与中国集采 | 全球视野|VBP|市场|中国|设备|全球|-健康界 \(cn-health care.com\)](#)

[字节跳动的“求医路” \(baidu.com\)](#)

[China's life expectancy is now higher than that of the US \(yahoo.com\)](#)

[2022 国内中医市场规模现状及发展分析\\_中研普华\\_中研网 \(chinairn.com\)](#)

**Disclaimer**

The information in this publication is provided for background information that should enable you to get a picture of the subject treated in this document. It is collected with the greatest care based on all data and documentation available at the moment of publication. Thus this publication was never intended to be the perfect and correct answer to your specific situation. Consequently it can never be considered a legal, financial or other specialized advice. Flanders Investment & Trade (FIT) accepts no liability for any errors, omissions or incompleteness, and no warranty is given or responsibility accepted as to the standing of any individual, firm, company or other organization mentioned.

Date of publication: October 2022

