



# The Growth of Capsule Endoscopy

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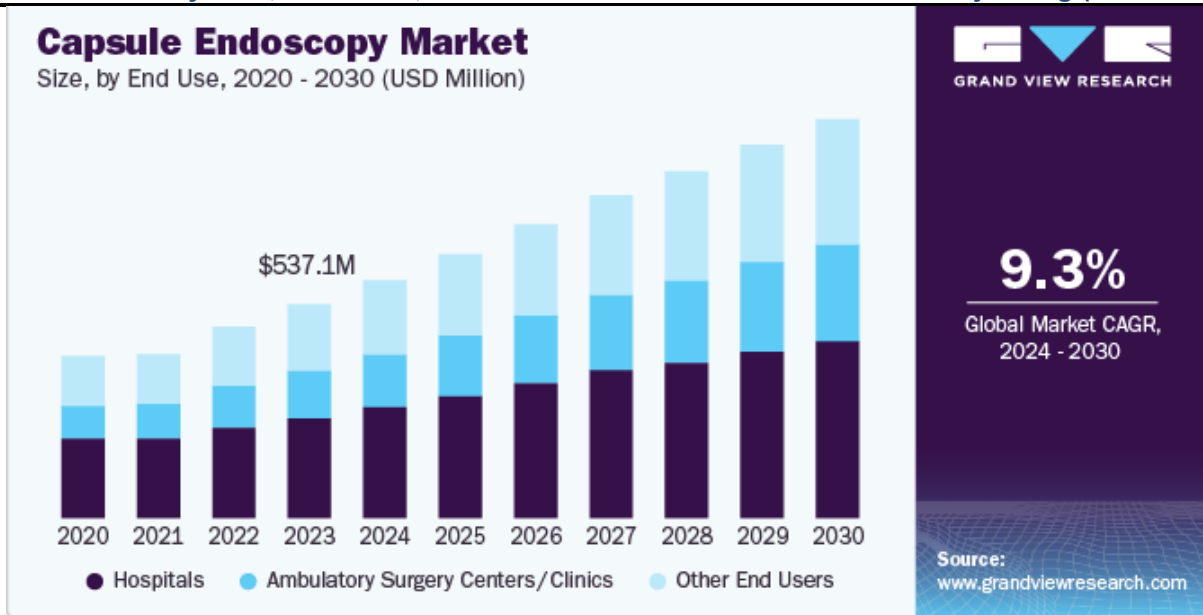
**Abstract:** Capsule endoscopy is a diagnostic procedure for the gastrointestinal tract that uses a pill-sized camera to capture images of the small intestine. This article discusses the regional adoption and applications of capsule endoscopy, emphasizing its growing use in regions such as North America, the Asia Pacific, and others. It is driven by advancements in healthcare infrastructure and increased awareness of the importance of early disease detection. Additionally, the benefits and limitations of the procedure are explored.

## Introduction:

Capsule endoscopy is a non-invasive diagnostic procedure designed to visualize the interior of the digestive tract. The patient swallows a small capsule equipped with a tiny camera, a light source, and a transmitter. As the capsule travels through the digestive system, it captures thousands of images and transmits them to an external recorder worn by the patient. The recorded data is then uploaded to a system that compiles the images into a video. This video helps healthcare professionals identify abnormalities within the digestive tract and aids in diagnosing conditions such as Crohn's disease, gastrointestinal bleeding, celiac disease, ulcerative colitis, colon polyps, and colorectal cancer.

## Growth:

The global capsule endoscopy market was valued at USD 537.10 million in 2023 and is expected to grow at a compound annual growth rate (CAGR) of 9.29% from 2024 to 2030. Key drivers of this growth include the rising prevalence of cancer, an increasing geriatric population, demand for minimally invasive diagnostic procedures, and advancements in capsule technology. In 2020, there were 18.1 million new cancer cases globally, highlighting the need for effective diagnostic tools like capsule endoscopy. The procedure's benefits, such as painless imaging, precise diagnosis, and quick results, have boosted its adoption.



Source: <https://www.grandviewresearch.com/industry-analysis/capsule-endoscopes-market>

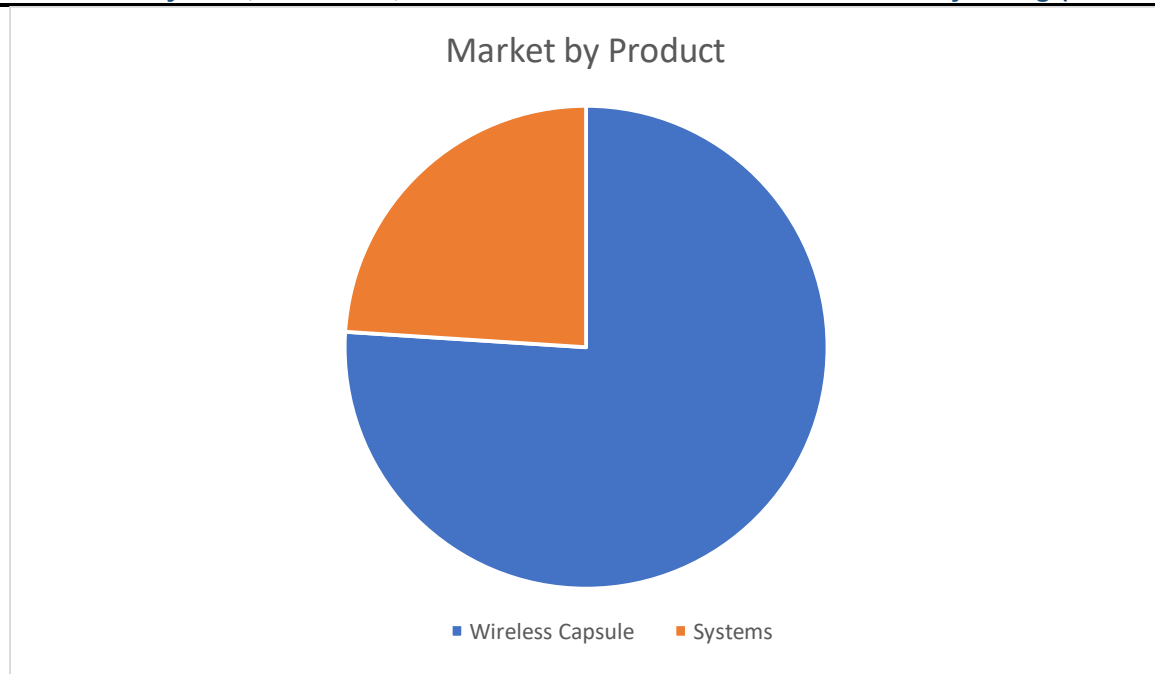
Technological advancements, such as longer battery life, Wi-Fi-enabled devices, 360-degree panoramic views, and improved image quality, are further propelling market growth. The aging population, which is more prone to gastrointestinal disorders like colorectal cancer and Crohn's disease, also supports market expansion. In 2021, approximately 149,500 adults in the U.S. were diagnosed with colorectal cancer, underscoring the need for early detection methods like capsule endoscopy.

However, the market faces challenges, including the risk of capsule retention and the procedure's limitation to diagnostics only. The COVID-19 pandemic also disrupted the market, causing delays in elective surgeries, supply chain issues, and changes in training methods for medical professionals. Despite these setbacks, the market is expected to recover post-pandemic, driven by the advantages of capsule endoscopy, such as its effectiveness in detecting gastrointestinal bleeding, as highlighted in a 2021 study. Overall, the market is positioned for growth, driven by technological innovations and the rising demand for minimally invasive diagnostic solutions.

The capsule endoscopy market is segmented by end-use into hospitals, ambulatory surgery centres (ASCs)/clinics, and others. In 2023, the hospital segment dominated the market due to the widespread adoption of capsule endoscopy services in hospitals. Hospitals, being the primary healthcare providers in most countries, perform a higher number of screenings, driving product demand and adoption. Meanwhile, the ASCs/clinics segment is expected to grow at the fastest rate during the forecast period. This growth is fuelled by the minimal time required for capsule endoscopy procedures and the ability to deliver faster results, making ASCs/clinics an attractive option for patients and healthcare providers.

### Product Growth:

The global capsule endoscopy market is divided by product into wireless capsules and systems. In 2023, the wireless capsule segment dominated the market, holding a 76.02% revenue share, and is expected to grow at the fastest CAGR of 9.45%. This growth is driven by the advantages wireless capsules offer in diagnosing complex conditions like gastrointestinal diseases, cancer, Crohn's disease, and other small bowel disorders. The increasing preference among medical professionals for wireless capsule endoscopy, due to its efficiency and quicker diagnosis, further fuels the segment's expansion.



### Regional Uses:

North America led the capsule endoscopy market in 2023, holding a 43.6% revenue share, driven by the preference for minimally invasive procedures, adoption of advanced technologies, and robust healthcare infrastructure. Increased awareness of early disease screening for gastrointestinal disorders, cancer, and chronic conditions also supported market growth. Meanwhile, the Asia Pacific region is expected to grow at the fastest CAGR during the forecast period, fuelled by rising demand for capsule-based endoscopic technologies, improving healthcare infrastructure, and a growing geriatric population. Economic development, international investments, and the presence of major players and startups further contribute to the region's market expansion.



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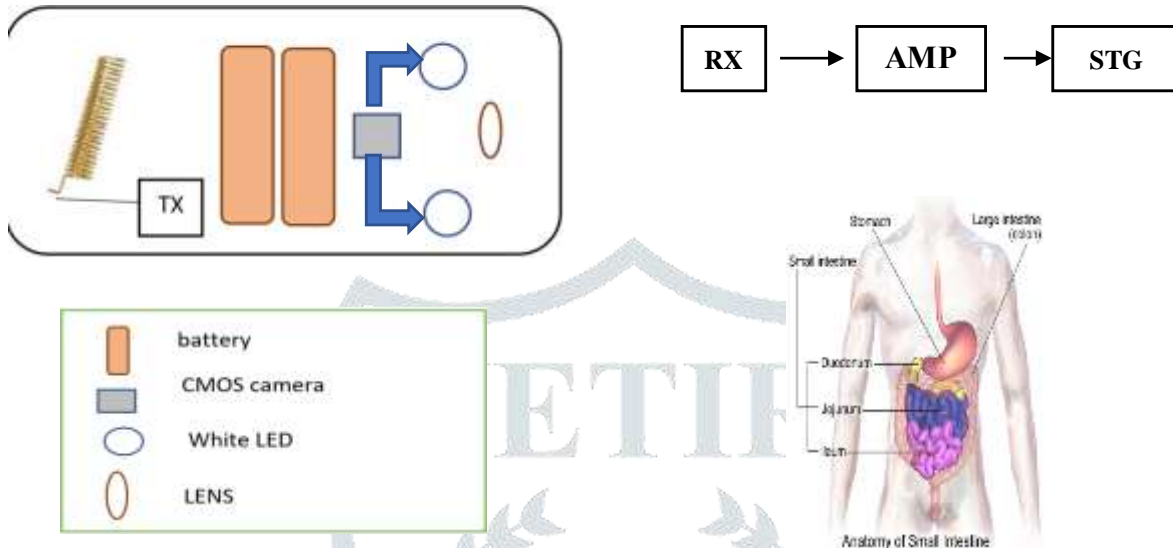
### Benefits and Drawbacks:

Capsule endoscopy has many advantages; one of the biggest benefits is that it can examine the small intestine, which is difficult to reach. It can also find problems in the intestines that might not show up on imaging tests like CT scans or x-rays. It requires very little preparation and does not need anaesthesia. The procedure is as easy as swallowing a pill.

However, capsule endoscopy also has some disadvantages. While it is generally safe and painless, there is a small risk that the pill camera could get stuck in the small intestine, especially in the narrower areas (strictures). If this happens, it could cause a blockage, known as a small bowel obstruction. Symptoms of a blockage include bloating, stomach pain, nausea, vomiting, fever, trouble swallowing, or chest pain. While it can help in finding the problems in the small intestine, it cannot fix those problems.

## References:

1. <https://www.ncbi.nlm.nih.gov/books/NBK482306>



2. <https://www.grandviewresearch.com/industry-analysis/capsule-endoscopes-market#:~:text=The%20global%20capsule%20endoscopy%20market,9.29%25%20from%202024%20to%202030.>
3. <https://www.hopkinsmedicine.org/health/treatment-tests-and-therapies/capsule-endoscopy>