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KAIXIN ULTRASOUND BLADDER SCANNER

---- BVT SERIES

Caring for patients is our eternal pursuit!

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01. Product clinical demand background

In many clinical situations, it is necessary to know the urine output of the bladder in time,

Such as: bladder function assessment, critically ill patients, patients with urinary retention, neurogenic bladder, etc.

Four ways to diagnose bladder volume

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Ultrasound
scanner

Catheteriz
ation

Bladder
scanner

Percussion

Advantages and disadvantages of the four detection methods

Ultrasound scanner	Bladder scanner	Percussion	Catheterization
<p>1. The measurement accuracy of B-ultrasound is poor, and the data error is $\pm 30\%$.</p> <p>2. The operation of B-ultrasound is professional, and it is extremely inconvenient for clinical application for various frequent catheterization.</p>	<p>1. Acquire bladder capacity data quickly and accurately, and the data can be archived .</p> <p>2. Non -invasive and easy to operate .</p> <p>3. The main clinical diagnostic methods in Europe and America .</p>	<p>1. The data is inaccurate and unfounded, and there is a risk of doctor -patient disputes .</p> <p>2. The diagnostic consistency among different doctors is poor .</p> <p>3. The main clinical diagnostic methods in China.</p>	<p>1. The data is accurate .</p> <p>2. Catheterization is highly related to infection and trauma, and there is a risk of doctor -patient disputes .</p> <p>3. The patient is both uncomfortable and increases the work intensity of the medical staff.</p>

Comparison of Four Measurement Methods

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	Accuracy	Safety	Wheter fast	Patient experience	Medical care satisfaction	Doctor-patient dispute risk	Department income
Indwelling catheterization	×	●	●	×	×	×	×
Percussion	×	●	●	×	×	×	●
Ultrasound scanner	●	×	×	×	×	●	×
Bladder scanner	●	●	●	●	●	●	●

Advantages of bladder scanner

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Reduce the patient's intubation time, reduce the number of intubations, reduce the risk of trauma and infection, improve the patient's quality of life, and improve patient and nursing staff satisfaction □

02

Reduce the risk of bladder overdistension and reduce the risk of vesicoureteral reflux (VUR), hydronephrosis, urinary tract infection, and decreased or failed kidney function.

04

01 Reduce nosocomial infections, reduce medical costs, and reduce the use of antibiotics.

03

Avoid disputes and disputes between doctors and patients, and avoid the passive situation where the percussion in the hospital cannot explain how much urine is the basis for catheterization, reducing the risk of doctor -patient disputes.

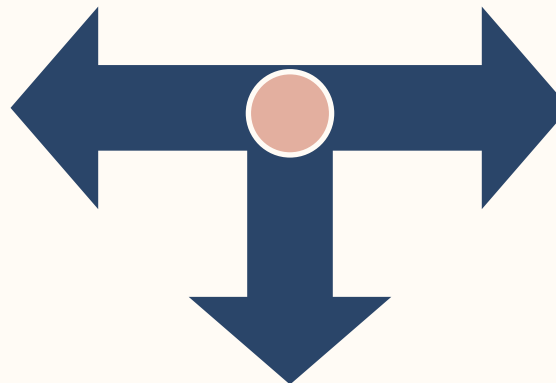
02. Product clinical application scenario



clinical application

Gynaecology and obstetrics

Postoperative patients with pelvic tumors or postpartum patients may delay or have difficulty urinating.



Radiotherapy

Urinary retention may occur in patients with pelvic tumor after surgery and receiving radiotherapy.



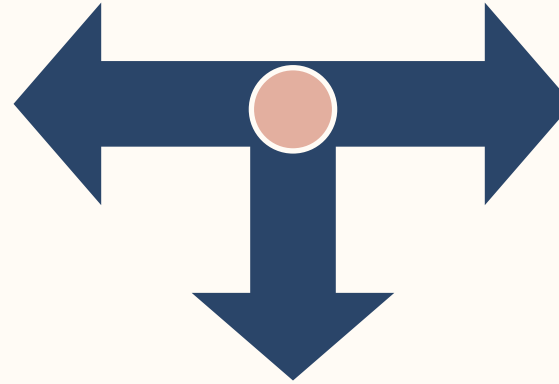
Urology

Patients with overactive bladder (OAB), bladder obstruction (BOO), and benign prostatic hyperplasia (BPH) may suffer from urinary retention.

clinical application

Rehabilitation
department and
rehabilitation
center

SCI(spinal -cord -injury)
patients can cause
urinary retention and
incontinence.



Endocrine
Department

With the expansion of the
course of diabetes, the
patient's micturition habit has
changed, and the thickness
of bladder wall and residual
urine volume have increased,
which may increase the
possibility of urinary tract
infection.



ICU

Patients with
severe or
unconscious
diseases cannot
control urination
independently.

Clinical significance

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Instruct doctors or nurses to introduce catheterization for patients at appropriate time to reduce the pain caused by catheterization and reduce the risk of urinary tract infection caused by frequent catheter insertion.

Guidelines for evaluating bladder function recovery before and after urology, gynecology and pelvic surgery.

To control the residual amount of urine after operation, prevent urinary retention, and control the urination rate of bladder to guide accurate pelvic radiotherapy. Non-invasive and immediate determination of bladder volume, without the need for professional ultrasound doctors, applicable to all departments.

Patients with neurogenic bladder, spinal cord injury and stroke can help assess the progress of bladder function recovery.

03.KAIXIN bladder scanner





Product introduction

BVT bladder scanner is a non-invasive ultrasound device that can provide virtual two-dimensional (3D) or (2D) images of the bladder for diagnosis, management and treatment of urinary outflow disorders.



Structural principle

It is mainly composed of mainframe, probe, etc. It is a non-invasive scanning of the patient's bladder using the ultrasonic scanning principle to complete the detection of the bladder area.



Intended use

It is used to evaluate urinary retention and incontinence, and objectively give the time when clinical catheterization is needed to reduce the frequency of catheterization and the risk of urinary tract infection. We can also evaluate the therapeutic effect of some drugs and treatment methods on urinary system diseases by measuring the residual amount of urine after urination.

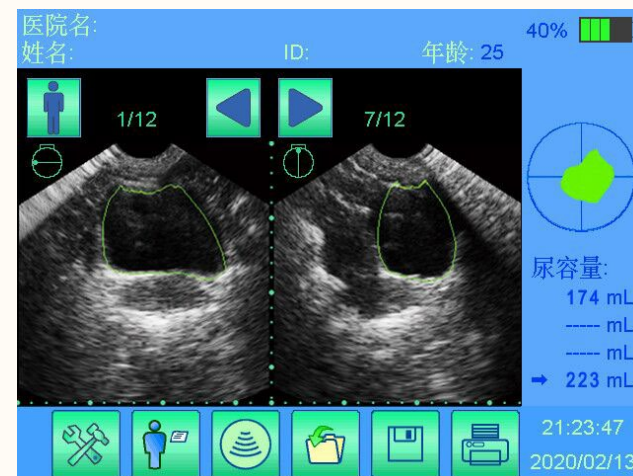
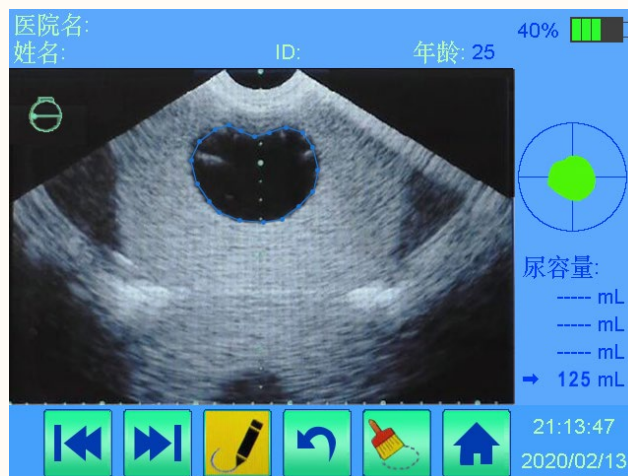
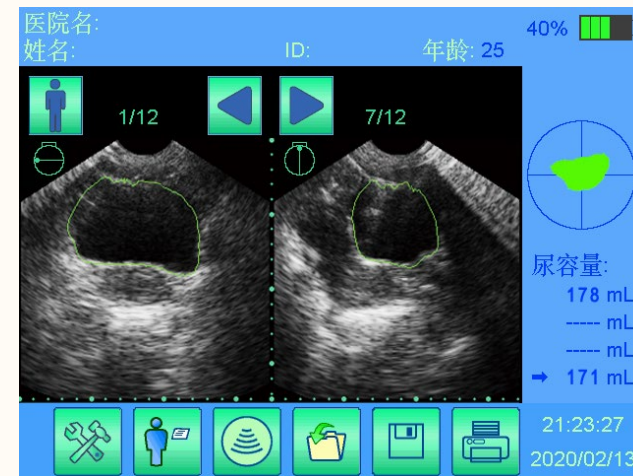
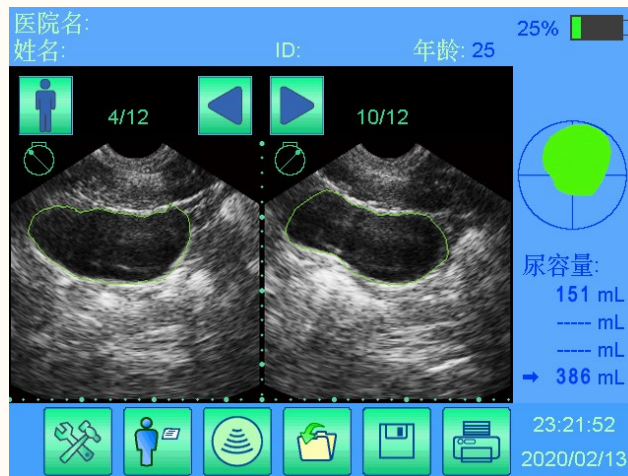
BVT01 Bladder scanner

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BVT01 images

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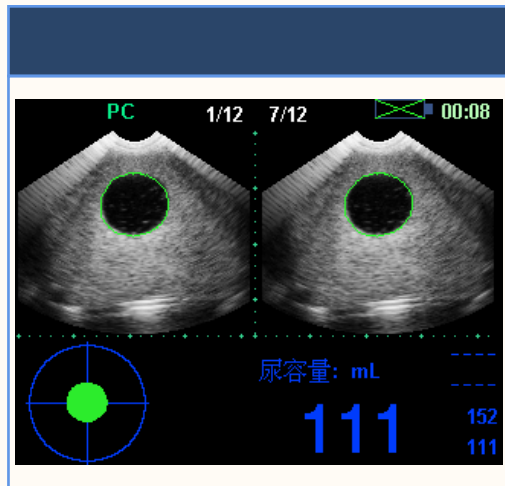
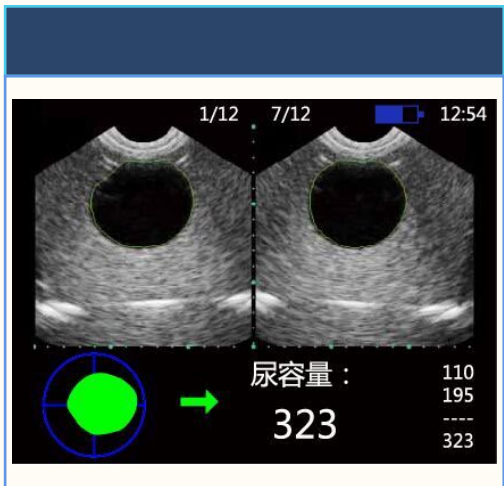


BVT02 bladder scanner

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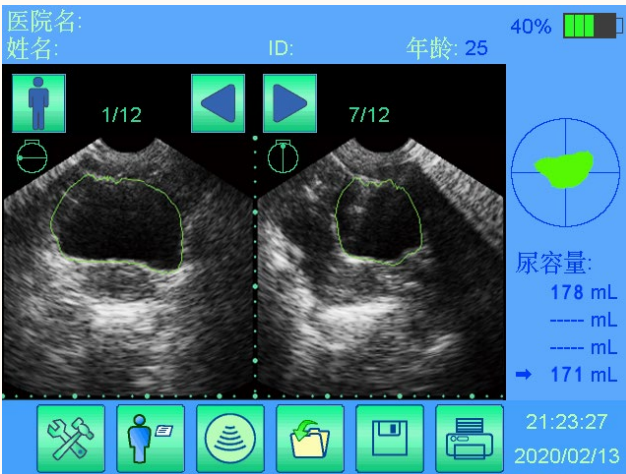


BVT02 images



Product function introduction

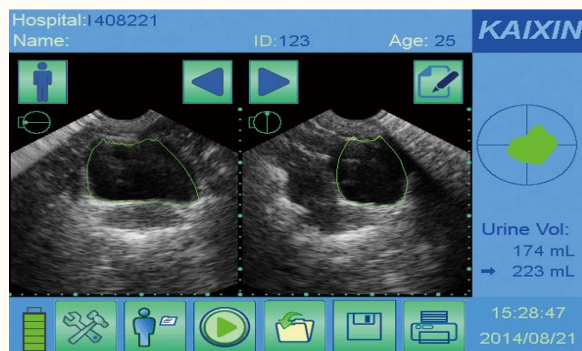
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- Advanced algorithms ensure the accuracy of measurement results of various abnormal shapes.
- The scanning results of 12 images of the image are clear at a glance.
- Manual plot function to improve measurement accuracy.
- Display four historical measurement results for comparison, so as to judge whether the results are valid.
- The 2D pre-scan interface can clearly display the cross-section of the bladder, so as to obtain the maximum cross-section of the bladder. Press the measurement key and keep the probe fixed for 4 seconds to obtain real-time residual urine data of the bladder.

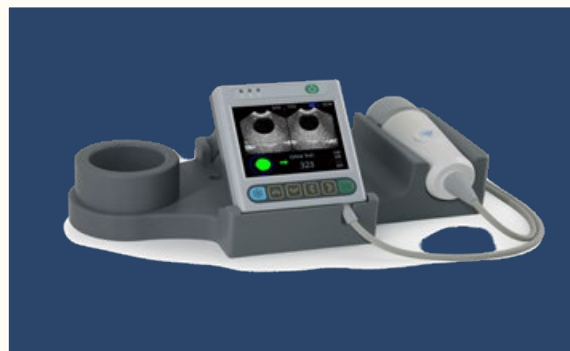
04. Advantages and characteristics of BVT series products





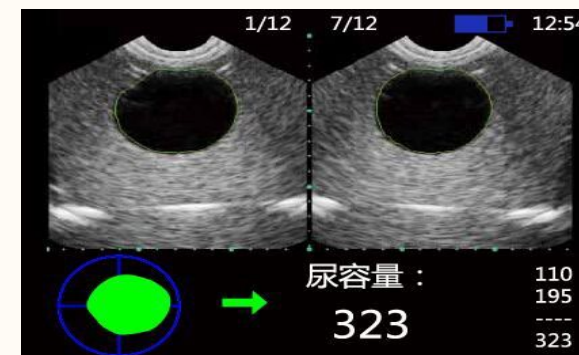
Safe and non-invasive

Compared with catheterization, the bladder scanner uses in vitro 3D ultrasound technology to measure residual urine volume, which is safe and non-invasive, and avoids unnecessary injury to patients.



High accuracy

Compared with traditional percussion and B-ultrasound detection, the bladder scanner is more targeted, and the results are closer to the actual value through specific algorithms.



Fast and easy to operate

Without professional doctors, nurses can also quickly operate through simple training. Compared with traditional B-ultrasound, it is simpler and faster, and only takes 4 seconds to get the results.

BVT01 □ 5.7”
Color touch
screen,
convenient for
user operation.

BVT02 □ Compact
design, portable.

12 measurement
result maps for
easy reading by
users.

Fast scanning (about
4s), greatly reducing
the error caused by
probe movement.

BVT01 is equipped with
a built-in thermal printer
to facilitate information
output at any time.

BVT02 is configured
with high-speed
transmission USB flash
disk to facilitate data
storage. At the same
time, it supports
workstation function
and real-time
transmission of
measurement results.

The external USB
interface provides
massive data
storage and
facilitates the later
software upgrade.

Large capacity
lithium battery
can work
continuously for
4-5 hours. Among
them, BVT01 can
be equipped with
an external
battery charger
to ensure the
continuous
operation of the
machine without
external power
supply.

05. Market summary and expectation of Kaixin urine capacity products



Development and analysis

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Since its launch, Kaixin Ultrasonic Bladder Scanner has experienced product recognition, cultivation and development in the market. Under the strong support of product strength, the sales volume has increased exponentially. In particular, the portable BVT02 bladder scanner is highly recognized by the international market. At the same time, COVID-19 has affected the global economy and the bladder scanner market. Various public health institutions have issued guidelines for diagnosing bladder cancer during the pandemic. This pandemic has made developing countries aware of the importance of using bladder scanners.



By 2021, the market value of bladder scanners has reached 134.12 million US dollars, growing at a CAGR of 5.54% in the forecast period. In addition, the increase of urgency, frequency, nocturia and pain caused by COVID-19 is also called COVID-19 related cystitis (CAC). This new symptom related to COVID-19 drives the growth of the market.

With its strong product strength, rich publicity means, perfect pre-sale, in-sale and after-sales support, and responsible international marketing channel cultivation, construction and maintenance, Kaixin bladder scanner has now covered More than 20 countries and regions with major developed health care systems in the world: Britain, Germany, France, Belgium, Italy, Spain, Finland, Sweden, Denmark, Norway, the Netherlands, Romania, Lithuania, Australia, Japan, New Zealand, Singapore, Canada, Hong Kong, Taiwan, India, etc (Including several national exclusive agents)

* FDA certification has entered the closing process

Market trend of bladder scanner

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Bladder scanner is expected to gain a large market share

According to a research report published in the BMC Journal of Gerontology in March 2021, the prevalence of urinary incontinence among elderly women in Asia is the highest, 45.1%. Healthcare professionals (mainly nurses) use this device to measure the residual volume after urination (PVR) and prevent unnecessary catheter insertion. Research, reduce urinary tract infection (UTI), monitor the occult urinary incontinence after surgery and trauma, etc.



North America's leading market

North America is expected to dominate the global bladder scanner market due to the rising prevalence of urinary system diseases and high health care expenditure. It is estimated that there are 62700 cases of UTI every year. Urinary tract infection accounted for more than 9.5% of the infections reported in emergency hospitals. Therefore, the increase of chronic diseases has increased the demand for bladder scanners and increased the demand for bladder scanners in the region.



Forecast of global bladder scanner market capacity

According to the research on the bladder scanner market data of Bezos Consulting, the global bladder scanner market size reached 2.325 billion yuan (RMB) in 2022, and the Chinese bladder scanner market size reached billion yuan. In view of the development trend of the bladder scanner market in the predicted years, Bezos Consulting predicts that the global bladder scanner market capacity will reach 3.229 billion yuan by 2028 with a growth rate of 5.63%.

Market trend of bladder scanner

The bladder scanner is a non-invasive ultrasound device or tool that can provide virtual two-dimensional (3D) or (2D) images of the bladder for diagnosis, management and treatment of urinary outflow disorders. The increase of urinary system diseases is driving the growth of the bladder scanner market.



The increasing burden of cancer related to the urinary tract has spurred the demand for diagnostic and scanning equipment, thus driving the market growth.



For example, according to the 2021 statistics report of the Global Cancer Observatory, bladder cancer and prostate cancer are among the top 10 most common cancers in the world. The same report also reported that by 2021, it is estimated that there will be 573278 new cases of bladder cancer and 1414259 new cases of prostate cancer for men and women. Over time, such a high global cancer incidence rate is driving the market.

Market trend of bladder scanner

The increasing popularity of advanced scanners has also promoted the growth of the market.



By eliminating the need for CT scanning, patients with bladder, prostate, gynecological and colorectal tumors will be able to use this enhanced scanning equipment, which is expected to improve the capacity of the department.



The acquisition of advanced technology for product development among market participants is also driving market growth. For example, in April 2020, Essity acquired Novioscan. The company is developing wearable ultrasound technology that can monitor the bladder and control urinary incontinence.



Therefore, the high burden of urinary system diseases and technological advances in scanners have driven market growth during the forecast period.

Market Trends in Bladder Scanners

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Portable bladder scanner market segment is expected to gain a large market share

Healthcare professionals (mainly nurses) use this device to measure post urination residual volume (PVR) and prevent unnecessary catheter insertion.

A major advantage of the dynamic ultrasound bladder scanner is that it is a user-friendly diagnostic program with high-end accuracy. In addition, the main advantages of dynamic ultrasound bladder scanners are portability, reliability, cost effectiveness, and non-invasive.

The increasing prevalence of urinary system diseases and the increasing preference for the use of portable bladder scanners are the main factors driving the growth of the bladder scanner market.

Research, reducing urinary tract infections (UTI), monitoring surgery and occult urinary incontinence after trauma, etc. Therefore, the increase in the prevalence of urinary system diseases and the increased preference for mobile bladder scanners are the main driving forces for the growth of the bladder scanner market.



North America's leading market

North America is expected to dominate the global bladder scanner market due to the rising prevalence of urinary system diseases and high healthcare spending.

Future of bladder scanner market

The major manufacturers of bladder scanners worldwide include Verathon Medical Europe, LABORIE, Vitacon, and DBMEDx. The top four manufacturers in the world have a total market share of over 65%. Currently, North America is the world's largest market for bladder scanners, with a market share of over 45%, followed by China and Europe, with a total share of over 35%.

According to reports, the global bladder scanner market sales in 2021 will reach \$134.12 million, and it is expected to reach \$184.15 million in 2027, with an annual composite normal rate (CAGR) of 5.54% (2022-2027). From a regional perspective, the Chinese market has undergone rapid changes in the past few years, with the development of China's economic level and the pressure of China's early entry into a deeply aging society. The market demand for bladder scanners in China and developing countries will be huge in the future.

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Thank you!

One world, one dream!



**XUZHOU KAIXIN ELECTRONIC
INSTRUMENT CO.,LTD**

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