

# Percutaneous Nephrolithotomy Market Opportunity, Growth Drivers, Industry Trend Analysis, and Forecast 2025 - 2034

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## Abstracts

The Global Percutaneous Nephrolithotomy Market was valued at USD 1.2 billion in 2024 and is estimated to grow at a CAGR of 6.8% to reach USD 2.3 billion by 2034.

Market expansion is driven by the increasing prevalence of kidney stones, growing patient preference for minimally invasive surgical procedures, rapid technological advancements in PCNL devices, and rising healthcare spending with improved access to specialized care. Minimally invasive PCNL procedures are becoming a preferred solution for treating large or complex kidney stones that cannot be addressed by non-invasive or less invasive techniques. The procedure involves a small incision to access the kidney directly using a nephroscope, allowing precise stone fragmentation and removal with minimal tissue damage and reduced recovery time. Expanding surgical infrastructure in developing regions and government initiatives to improve urological care further boost procedure volumes and broaden patient access to advanced PCNL treatment options.

The nephroscopes segment captured a share of 37.8% in 2024 owing to their indispensable role in PCNL procedures. Rising adoption of miniaturized and digital nephroscopes, along with ongoing product innovations enhancing visualization and surgical precision, reinforces the segment's leadership. The growing incidence of urolithiasis, influenced by lifestyle factors such as obesity, dehydration, and high-sodium diets, increases the number of patients requiring PCNL procedures, directly driving demand for high-performance nephroscopes.

The standard PCNL segment generated USD 690.4 million in 2024 and is expected to grow at a CAGR of 6.7% through 2034. Standard PCNL continues to be the preferred

technique for removing kidney stones larger than 2 cm, including staghorn stones, due to its superior stone clearance rates compared to other treatment options. Its established clinical effectiveness ensures continued adoption across both developed and emerging markets.

North America Percutaneous Nephrolithotomy Market held a 39.8% share in 2024. The region experiences one of the highest incidences of kidney stones globally, driven by factors such as obesity, high sodium intake, sedentary lifestyles, and diets rich in processed foods and animal protein. These factors contribute to increasing demand for PCNL procedures, supporting strong market growth.

Key players in the Global Percutaneous Nephrolithotomy Market include ADVIN, B. BRAUN, Becton, Dickinson and Company, Boston Scientific, Coloplast, COOK MEDICAL, Dornier MedTech, ELMED, EMS ELECTRO MEDICAL SYSTEMS, KARL STORZ, OLYMPUS, PolyDiagnost, Richard Wolf, and Teleflex. Companies in the Percutaneous Nephrolithotomy Market are strengthening their presence through several strategic approaches. They are investing heavily in research and development to enhance device efficiency, miniaturization, and imaging capabilities. Firms are entering partnerships and collaborations to expand geographic reach and diversify product offerings. Strategic acquisitions allow companies to consolidate market share and acquire innovative technologies. Focused entry into emerging markets captures new growth opportunities. Emphasis on advanced digital and minimally invasive solutions enhances competitive positioning.

## Contents

### CHAPTER 1 METHODOLOGY AND SCOPE

- 1.1 Market scope and definitions
- 1.2 Research design
  - 1.2.1 Research approach
  - 1.2.2 Data collection methods
- 1.3 Data mining sources
  - 1.3.1 Global
  - 1.3.2 Regional/country
- 1.4 Base estimates and calculations
  - 1.4.1 Base year calculation
  - 1.4.2 Key trends for market estimation
- 1.5 Primary research and validation
  - 1.5.1 Primary sources
- 1.6 Forecast model
- 1.7 Research assumptions and limitations

### CHAPTER 2 EXECUTIVE SUMMARY

- 2.1 Industry 360° synopsis
- 2.2 Key market trends
  - 2.2.1 Regional trends
  - 2.2.2 Product type trends
  - 2.2.3 Procedure type trends
  - 2.2.4 Patient trends
  - 2.2.5 End use trends
- 2.3 CXO perspectives: Strategic imperatives
  - 2.3.1 Key decision points for industry executives
  - 2.3.2 Critical success factors for market players
- 2.4 Future outlook and strategic recommendations

### CHAPTER 3 INDUSTRY INSIGHTS

- 3.1 Industry ecosystem analysis
- 3.2 Industry impact forces
  - 3.2.1 Growth drivers
    - 3.2.1.1 Rising prevalence of kidney stone disease

- 3.2.1.2 Increasing adoption of minimally invasive urological procedures
- 3.2.1.3 Advancements in PCNL instrumentation and laser technologies
- 3.2.1.4 Growing preference for mini-PCNL and micro-PCNL techniques
- 3.2.2 Industry pitfalls and challenges
  - 3.2.2.1 High cost of PCNL equipment and procedures
  - 3.2.2.2 Risk of surgical complications and postoperative infections
- 3.2.3 Market opportunities
  - 3.2.3.1 Growing adoption of single-use PCNL instruments
  - 3.2.3.2 Expansion in emerging markets
- 3.3 Growth potential analysis
- 3.4 Regulatory landscape
  - 3.4.1 North America
  - 3.4.2 Europe
  - 3.4.3 Asia Pacific
- 3.5 Technology landscape
  - 3.5.1 Current technological trends
  - 3.5.2 Emerging technologies
- 3.6 Reimbursement scenario
- 3.7 Future market trends
- 3.8 Value chain analysis
- 3.9 Porter's analysis
- 3.10 PESTEL analysis
- 3.11 Gap analysis
- 3.12 Start-up scenario
- 3.13 Consumer behaviour insights

## **CHAPTER 4 COMPETITIVE LANDSCAPE, 2024**

- 4.1 Introduction
- 4.2 Company matrix analysis
- 4.3 Company market share analysis
  - 4.3.1 Global
  - 4.3.2 North America
  - 4.3.3 Europe
  - 4.3.4 Asia Pacific
- 4.4 Competitive positioning matrix
- 4.5 Competitive analysis of major market players
- 4.6 Key developments
  - 4.6.1 Mergers & acquisitions

- 4.6.2 Partnerships & collaborations
- 4.6.3 New product launches
- 4.6.4 Expansion plans

## **CHAPTER 5 MARKET ESTIMATES AND FORECAST, BY PRODUCT TYPE, 2021 - 2034 (\$ MN)**

- 5.1 Key trends
- 5.2 Nephroscopes
  - 5.2.1 Rigid
  - 5.2.2 Flexible
- 5.3 Lithotripsy systems
- 5.4 Access systems
- 5.5 Other product types

## **CHAPTER 6 MARKET ESTIMATES AND FORECAST, BY PROCEDURE TYPE, 2021 - 2034 (\$ MN)**

- 6.1 Key trends
- 6.2 Standard PCNL
- 6.3 Mini-PCNL
- 6.4 Micro-PCNL

## **CHAPTER 7 MARKET ESTIMATES AND FORECAST, BY PATIENT, 2021 - 2034 (\$ MN)**

- 7.1 Key trends
- 7.2 Adult
- 7.3 Pediatric

## **CHAPTER 8 MARKET ESTIMATES AND FORECAST, BY END USE, 2021 - 2034 (\$ MN)**

- 8.1 Key trends
- 8.2 Hospitals
- 8.3 Ambulatory surgery centers
- 8.4 Other end use

## **CHAPTER 9 MARKET ESTIMATES AND FORECAST, BY REGION, 2021 - 2034 (\$**

**MN)**

- 9.1 Key trends
- 9.2 North America
  - 9.2.1 U.S.
  - 9.2.2 Canada
- 9.3 Europe
  - 9.3.1 Germany
  - 9.3.2 UK
  - 9.3.3 France
  - 9.3.4 Spain
  - 9.3.5 Italy
  - 9.3.6 Netherlands
- 9.4 Asia Pacific
  - 9.4.1 China
  - 9.4.2 Japan
  - 9.4.3 India
  - 9.4.4 Australia
  - 9.4.5 South Korea
- 9.5 Latin America
  - 9.5.1 Brazil
  - 9.5.2 Mexico
  - 9.5.3 Argentina
- 9.6 Middle East and Africa
  - 9.6.1 South Africa
  - 9.6.2 Saudi Arabia
  - 9.6.3 UAE

**CHAPTER 10 COMPANY PROFILES**

- 10.1 ADVIN
- 10.2 B. BRAUN
- 10.3 Becton, Dickinson and Company
- 10.4 Boston Scientific
- 10.5 Coloplast
- 10.6 COOK MEDICAL
- 10.7 Dornier MedTech
- 10.8 ELMED
- 10.9 EMS ELECTRO MEDICAL SYSTEMS

10.10 KARL STORZ

10.11 OLYMPUS

10.12 PolyDiagnost

10.13 Richard Wolf

10.14 Teleflex

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