

# KARL STORZ — LOTTA® Family

Offering you the ability to avoid implanting shunts  
in your obstructive hydrocephalus patients



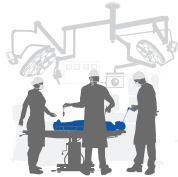
## Current Status - Hydrocephalus



Over **1 million** Americans have Hydrocephalus<sup>1</sup>

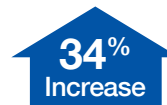


Could potentially be treated with Endoscopic Third Ventriculostomy (ETV)



**\$30K in savings**

Potential hospital stay cost reduction, per patient, with ETV vs. VP shunt<sup>2</sup>

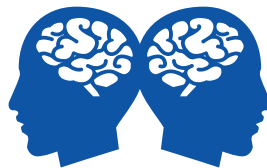


In hospital utilization and LOS\* in the US<sup>3</sup>

## Patients with obstructive hydrocephalus are most commonly treated with:

### Implantation of a ventriculoperitoneal (VP) shunt –

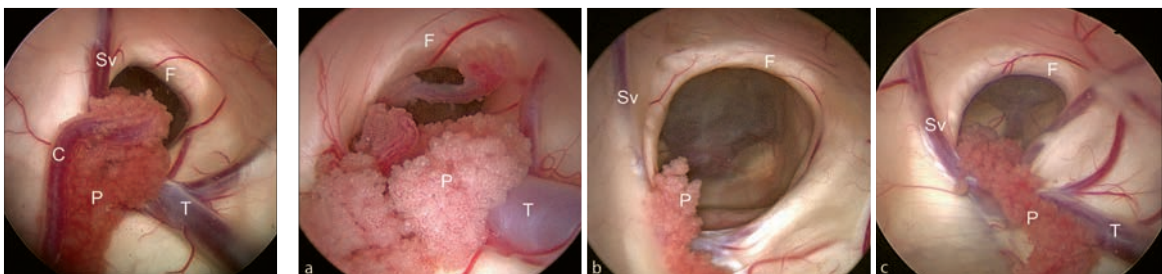
Implant that drains excess fluid from the brain to another part of the body.



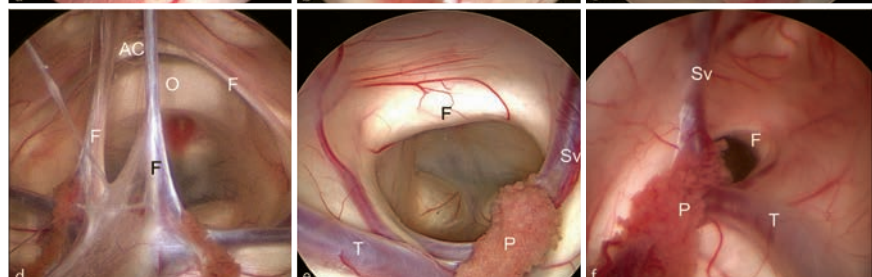
### ETV –

Opening created in the floor of the 3rd ventricle allows fluid to flow into another part of the brain.

Hydrocephalus is expensive, prevalent and there is no cure. For a segment of the hydrocephalus patient population, ETV provides numerous clinical benefits. For providers, the LOTTA® System makes it possible to perform a full range of endoscopic intraventricular interventions including an ETV instead of implanting a VP shunt. The smaller outer diameter of the Little LOTTA® (3.6 mm) proves to be particularly valuable for treating patients with narrow foramina of Monro and small ventricles.



Legend of Acronyms	
AC	anterior commissure
C	choroidal vein
F	fornix
O	optic chiasm
P	choroid plexus
Sv	septal vein
T	thalamostriate vein



Ventricular images from LOTTA® scope

\*Length of Stay (LOS)

# Endoscopic Third Ventriculostomy Differentiators

## 1. Improved Clinical Outcomes

- Significantly lower complication rate<sup>4</sup>
- Lower reoperation rate in the long term<sup>5,6</sup>
- Lower infection rate, less than 1%<sup>8</sup>
- Effective and safe<sup>4</sup>
- Gold standard for treatment of obstructive hydrocephalus<sup>4,7</sup>
- Patients most likely to succeed with ETV can be accurately identified<sup>9</sup>

	Age Range	Infection Rate	Success Rate	Failure window
VP Shunt	All ages	4.1 to 20.5% <sup>10</sup>	41 to 60% <sup>9</sup>	Lifelong risk of failure <sup>11</sup>
ETV	Over 2 years old	Less than 1% <sup>8</sup>	70 to 90% <sup>4,9,12</sup>	If ETV fails, failure usually happens in 3-6 months <sup>4</sup>

## 2. Reduced Expenses

- Reduced hospital stay cost by \$30K per patient<sup>2</sup>
- Preventing future shunt infections, an ETV could save up to \$140K per patient in future hospital cost<sup>2</sup>
- Reduced use of healthcare facilities<sup>2</sup>

## 3. Increased Patient Satisfaction

- Patients can be spared the long-term complications of VP shunting
- Likely lead to improved quality of life<sup>2,9</sup>
- Fewer overall procedures, which results in less disruption to life in society<sup>2,13</sup>
- Reduced healthcare cost for individual, family and society<sup>2,13</sup>

## Why KARL STORZ?

KARL STORZ offers a **reusable visualization** hydrocephalus portfolio to help you **improve efficiency** and **surgeon/patient satisfaction**, and allow you to provide personalized care and treatment options for your patients. **With the added bonus of removing the patient's life-long risk of shunt failure.**

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2. Poster presented at AANS/CNS peds 2017. Shunt infection rates decreased the popularization of ETV: a retrospective cohort study & cost saving analysis. OHSU
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4. Sonja Vulcu et al. Long-term results of endoscopic third ventriculostomy: an outcome analysis. Journal of Neurosurgery. Dec 2015. <http://thejns.org/doi/pdf/10.3171/2014.11.JNS14414>
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9. Kulkarni AV. et al. Endoscopic Third Ventriculostomy in the Treatment of Childhood Hydrocephalus The Journal of Pediatrics, Volume 155 Issue 2 , 254 - 259.e1
10. Simon TD, Hall M, Riva-Cambrin J, et al. Infection rates following initial cerebrospinal fluid shunt placement across pediatric hospitals in the United States. Neurosurg Pediatr. 2009;4(2):156-65.
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12. Watkins J, et al. Markedly Improved Success Rate of Endoscopically Assisted Third Ventriculostomy Is Achieved by Routine Placement of External Lumbar Drain. J Neurol Surg Rep. 2017;78(2):e71-e76

  
The logo features the number '75' in a large, bold, blue sans-serif font. The '5' has a white circle in its center, resembling an endoscopic lens. Below the '75', the word 'Years' is written in a blue, cursive script font.

*Shaping the Future  
of Endoscopy with you*

**STORZ**  
**KARL STORZ — ENDOSKOPE**

*THE DIAMOND STANDARD*

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