

# LIQOSEAL® reduces the risk of CSF leaks and healthcare costs

Cerebrospinal fluid (CSF) leaks represent a significant patient burden, resulting in increased morbidity, prolonged hospital stays, possible surgical revision, and enhanced costs.

## Post-operative CSF leaks

occur on average in **8.4%** of cranial surgeries<sup>1</sup>.



## Patient perspective

CSF leakage results in an average increase in hospital stay of **6 days**.

On average, patients with a CSF leak stay in hospital for **14 days**, compared to only **8 days**<sup>2</sup> for patients without a CSF leak<sup>2</sup>.



## Payer perspective

Mean cost associated with an incisional CSF leak is **€29.816** compared to **€20.045 (+49%)** for patients without a leak<sup>2</sup>.

Major cost contributors are hospital admission time and treatment of complications such as infection and meningitis<sup>2</sup>.



Sealants that are commonly used in adjunct to standard methods of dural repair aiming to provide watertight closure, reduce hospital costs associated with treatment of infection and meningitis by on average by **3.7%**<sup>2</sup> but **do not reduce** the incidence of post-operative CSF leaks<sup>1</sup>.

## LIQOSEAL® clearly offers clinical benefits and economic value



Based on currently available data<sup>3</sup>, **no post-operative CSF leakage is observed with the use of LIQOSEAL®** resulting in a potential **cost reduction of at least €9.771** per patient, for each avoided case of CSF leakage<sup>2</sup>.

**References:** (1) Kinaci A, Algra A, Heuts S, O'Donnell D, van der Zwan A, van Doormaal T. Effectiveness of Dural Sealants in Prevention of Cerebrospinal Fluid Leakage After Craniotomy: A Systematic Review. *World Neurosurg.* 2018. Oct;118:368-376 (2) Frederix, G., van Lieshout, C., van der Meulen, M., Slot, E. Cost analysis of cerebrospinal fluid leakage after cranial surgery; quantifying the room for improvement. An early economic evaluation for Polyganics. 2020 (3) van Doormaal TPC, Germans MR, Sie M, Brouwers B, Fierstra J, Depauw PRAM, Robe PA, Regli L. Single Arm, Open-Label, Multicenter Study to Evaluate the Safety and Performance of Dura Sealant Patch in Reducing Cerebrospinal Fluid Leakage Following Elective Cranial Surgery: The ENCASE Trial Study Protocol. *Neurosurgery.* 2019 Oct 1