**Supplementary Materials**

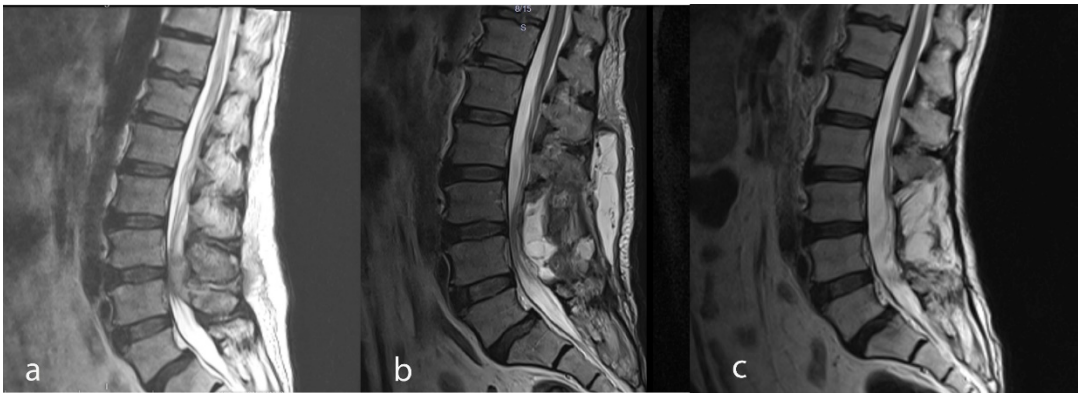



**Figure S1:** This figure provides an illustrative case ex-ample of early postoperative recurrence and long-term outcome following repeat surgical debridement and drainage. A 61-year-old male patient was discharged 22 days after his first surgery. However, he was readmitted 28 days after discharge and was found to have a recurrence of the lumbar spinal abscess. The patient underwent reoperation, drainage, and debridement. Clinical and radiological follow-up 3 years after the second surgery revealed complete recovery and no recurrence. Tissue samples obtained from both surgeries grew *methicillin-sensitive Staphylococcus aureus* (MSSA). The patient's sagittal T2-weighted MRI images are shown. **(a)** Before the first surgery, **(b)** Before the second surgery, **(c)** Three years after the second surgery.

**Supplementary Table S1.** Study eligibility criteria

| Inclusion criteria | Exclusion criteria |
|---|---|
| Adults (≥18 years) | Parasitic spinal infection (e.g., echinococcosis) |
| Surgical treatment for primary spinal infection (PSI) | Prior surgery in the same spinal segment |
| Index surgery performed between January 2017 and December 2023 | Incomplete clinical data |
| Minimum postoperative follow-up ≥12 months | Lost to follow-up before 12 months |
| Primary PSI at presentation (non-postoperative, non–implant-related) | Postoperative or implant-related infection at presentation |