Objectives: Pulmonary embolism is the leading cause of death among hospitalised patients. It has been suggested that pulmonary embolism may be prevented by using prophylactic caval filters. We reported the mid-term results of 63 patients who received a new commercially available retrievable filter device.

Methods: Between January 2001 and October 2005, 63 consecutive patients (mean age 65±15 years) underwent placement of ALN filters. Thirty-five patients (55%) had femoro-iliac thrombosis, whereas 28 patients (45%) had ilio-caval thrombosis. Overall, 49% had PE. Indications for filter placement were PE prophylaxis (n = 33), temporary contraindication to anticoagulant therapy with or without proven PE (n = 29), and anticoagulant therapy failure (n = 1). Filter removal was performed when anti-thrombotic prophylaxis was considered unnecessary or when the patient could safely resume full anticoagulant therapy. Follow-up protocol included clinical evaluation plus radiological examination with color-coded-ultrasonography and thoraco-abdominal computed tomographyangiography associated to abdominal X-rays 1, 3, 6, and 12-months after filter implantation, and yearly thereafter.

Results: Technical success for filter insertion was 100%, without any complications. None of the procedures aborted or was converted due to technical difficulties. After a median follow-up of 21months (range 1–48, median 18), there were no cases of PE or vena cava thrombosis. Two patients died of DVT-unrelated causes during the follow-up period without clinical evidence of PE or filter-associated complications. No case of device migration was observed. Twenty (31.7%) retrieval attempts were performed: in 16 cases filters were successfully retrieved, whereas 4 cases aborted. The mean implantation period was 179 days (range 53–370).

Conclusion: Our results confirm the clinical efficacy of the ALN filter either in preventing potentially fatal PE during implantation times, or in postoperative absence of complications owing to its shape that assured low thrombogenicity and occlusivity, even if it was left in place definitively, and also without antithrombotic therapy.