A n ambitious French study has been launched with the goal of determining the clinical and medico-economic benefit of femtosecond laser-assisted cataract surgery, according to Cédric Schweitzer MD.

Addressing delegates attending the annual meeting of the French Implant and Refractive Surgery Association (SAFIR), Dr Schweitzer said the FEMCAT* study represented an important and necessary effort to establish some scientific basis for the theoretical benefits of femto-cataract surgery.

“We lack robust data looking at this question, so there is a definite need for studies like FEMCAT. Our goal is to validate the clinical and medico-economic utility of femtosecond laser-assisted cataract surgery compared to standard phacoemulsification,” he said.

The controlled, randomised study, which has received funding of €3.1m from the French health ministry, will be coordinated by Dr Schweitzer and co-workers at the University Hospital of Bordeaux, and will also include clinical centres in Paris (Cochin Hospital), Lyon (Croix Rousse Hospital), Brest and Tours.

The two-year FEMCAT study will recruit 2,000 patients in total, half of whom will be randomised to undergo femto-cataract surgery and the other half classic phacoemulsification surgery.

Surveying the scientific literature, Dr Schweitzer said that the case series published to date reported several distinct advantages associated with femtosecond laser use in cataract surgery.

“Incisions are more precise, reproducible and watertight than manual incisions. In terms of the capsulorhexis, they are better centred, more circular and allow for better positioning of the IOL. There is also less energy delivered into the eye for the fragmentation process. The refractive results from one study showed better centration of the implant and better spherical equivalent postoperatively compared to results achieved using traditional manual techniques,” he said.

Dr Schweitzer noted that while many medico-economic studies have highlighted the role of improved technology in making cataract surgery one of the most beneficial and cost-effective surgeries available today, the case has not been definitively made yet for femto-cataract surgery.

“This is really why we want to validate, in a French context, the benefits of femto-cataract procedures such as enhanced surgical safety, reduction in intraoperative and postoperative complications and faster anatomical and visual recovery, and assess its implications for the national health system,” he said.

The latest data show that between 660,000 and 680,000 cataract procedures are carried out annually in France, said Dr Schweitzer.

“The average patient age is around 74 years, with significant growth expected in the number of cataract procedures needed in the future due to the ageing of the population. The cost to the French health system is currently estimated at €900m annually, although this figure does not take account of cases with complications, so the real figure is much higher in reality,” he said.

Summing up, Dr Schweitzer reminded delegates that cataract removal remains one of the most beneficial and cost-effective surgeries from the point of view of the individual and society.

“No matter what country or region we look at, the cost-utility ratio of cataract surgery is superior to no intervention. The ratio is also significantly better than other surgical procedures, with only hip surgery coming close in terms of cost-effectiveness,” he said.

For femto-cataract surgery, Dr Schweitzer noted that the technology is expensive and the medical and refractive benefit remains to be proven in larger and more robust studies.

“We hope at the end of our study to have a clearer idea of the real medical benefit of femtosecond cataract technology on a French population, as well as the additional cost that would be acceptable to society in the event of these benefits being proven,” he said.

* “FEMCAT: “impact médico-éonomique de la chirurgie de la cataracte au laser femtoseconde,” CHU de Bordeaux, supported by a grant from the French ministry of health (PSTIC 2012).