

Platinum coils are frequently used for endovascular treatment of cerebral aneurysms. The benefit of coil radioactivation prior to embolisation was recently demonstrated in an animal study where recanalization mechanisms were inhibited by beta ^{32}P radiation. A dedicated ion accelerator is used to create a radioactive phosphorous beam hitting the coils aligned in the beam path. The production of radioactive coils will be discussed, including accelerator parameters and critical operation mode to maximize overall activation efficiency. The method to characterize resulting coils will be explained. The analysis of a large number of implanted coils is showing very good radiation uniformity along the coil length and a controlled activity from coil to coil. The activation efficiency was improved to insure reliable and safe production of ^{32}P activated coils. Finally we are presenting results from a 40 patients clinical study using radioactive coils.