RADIOPAQUE BIODEGRADABLE METALLIC SCAFFOLD WITH A NON-BIODEGRADABLE COATING, AND WHICH INCLUDES RADIAL SUPPORT SEGMENTS AND RESILIENTLY FLEXIBLE, PREFERENTIALLY FRACTURABLE AXIAL LINKS THEREBETWEEN

ABSTRACT

An implantable scaffold structure includes a biodegradable metallic scaffold; an inner non-biodegradable polymer coating conformally covering the scaffold; an outer coating formed of a biodegradable or non-biodegradable polymer, and having an outer surface; and a radiopaque material disposed external to the inner coating and internal to the outer surface of the outer coating along the scaffold structure's length, wherein the inner coating electrochemically isolates the radiopaque material from the scaffold. The scaffold structure includes a plurality of radial support rings, each of which includes a pair of radial struts that are axially coupled by bridge members. Pairwise adjacent radial support rings are axially coupled by preferentially fracturable links, each of which includes a curved section along its length that is mechanically weaker than the struts or bridge members, such that increasing numbers of adjacent radial support members progressively become decoupled from each other over time following scaffold structure implantation.

Figure 6A