What is claimed is:

1. An endovascular microvalve device for temporary use in a vessel having a vessel wall during an intravascular procedure, comprising:

a) a flexible outer catheter having a proximal end and a distal end;

b) a flexible inner catheter having a proximal end and a distal end with an orifice, the inner catheter extending through and longitudinally displaceable relative to the outer catheter; and c) a filter valve having a proximal end and distal end, the proximal end of the filter valve coupled to the distal end of the outer catheter, and the distal end of the filter valve coupled to the inner catheter adjacent the distal end of the inner catheter, such that longitudinal displacement of the inner catheter relative to the outer catheter moves the filter valve from a non-deployed configuration to a deployed configuration, the filter valve having a proximal portion comprising a braided filamentary structure consisting of a first number of filamentary portions, and distal portion comprising an arrangement of second number of filamentary portions, the second number fewer than the first number, and the distal portion further comprising a porous polymeric material coupled to the filamentary portions of the distal portion, the porous polymeric material defining a pore size not exceeding 500μm.

2. An endovascular microvalve device according to claim 1, wherein:

once the filter valve is in the deployed state in the vessel, the filter valve is dynamically movable depending on a local fluid pressure about the filter valve, such that,

when the fluid pressure is higher on a proximal side of the filter valve, the filter valve assumes a configuration with a first diameter smaller than the diameter of the vessel such that fluid flow about the filter valve is permitted, and

when the fluid pressure is higher on a distal side of the filter valve, the filter valve assumes a configuration with a second diameter relatively larger than the first diameter and in which the filter valve is adapted to contact the vessel wall.

3. An endovascular microvalve device according to claim 1, wherein:

the proximal portion exerts a higher radial force than the distal portion of the filter valve.

4. An endovascular microvalve device according to claim 1, wherein:

the second filamentary portions coextend from the first filamentary portions.

5. An endovascular microvalve device according to claim 1, wherein:

the first and second filamentary portions are discrete from each other.

6. An endovascular microvalve device according to claim 1, wherein:

the second filamentary portions are equally displaced about a circumference of the filter valve.

7. An endovascular microvalve device according to claim 1, wherein:

the second filamentary portions are unequally displaced about a circumference of the filter valve.

8. An endovascular microvalve device according to claim 1, wherein:

the second filamentary portions are spirally wound about the distal portion.

9. An endovascular microvalve device according to claim 8, wherein:

the second filamentary portions extends in a first winding direction when the filter valve is in the non-deployed configuration, and when the filter valve is moved from the non-deployed configuration to the deployed configuration, the second filamentary portions reverse winding direction relative to the first winding direction.

10. An endovascular microvalve device according to claim 1, wherein:

the first and second filamentary portions have a diameter of 0.025 mm to 0.127 mm.

11. An endovascular microvalve device according to claim 10, wherein:

the first filamentary portions of the proximal portion have proximal ends secured relative to each other on the outer catheter such that the first filamentary portions define a round configuration extending between their secured proximal ends on the outer catheter and the distal portion of the filter valve.

12. An endovascular microvalve device according to claim 1, wherein:

the filter valve defines a maximum diameter at an intersection of the proximal and distal portions.

13. An endovascular microvalve device according to claim 1, wherein:

the proximal portion further includes a porous polymeric material provided to the braided filamentary structure.

14. An endovascular microvalve device according to claim 1, wherein:

in a non-deployed configuration, the filter valve includes a distal face that is convex in shape, and in a deployed configuration, the distal face of the filter valve is planar or concave.