

Claims

1. Implantation catheter (1), comprising:
 - a first (inner) catheter shaft (10);
 - 5 - a holding element (101) being arranged at a distal end (10-1) of the first catheter shaft (10) and being configured for holding and releasing the implant (2);

characterized in that

the holding element (101) comprises a shape memory element (1011), particularly a pseudoelastic element.

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2. Implantation catheter (1) according to claim 1, **characterized** in that the shape memory element (1011) comprises a loop.
3. Implantation catheter (1) according to one of the preceding claims, **characterized** in
15 that the shape memory element (1011) comprises a nitinol wire.
4. Implantation catheter (1) according to one of the preceding claims, **characterized** in that the first catheter shaft (10) comprises an actuation element (102) that may be actuated at a proximal end of the first catheter shaft (10) for deforming the shape
20 memory element (1011).
5. Implantation catheter according to claim 4, **characterized** in that the actuation element (102) extends inside a first lumen (103) of the first catheter shaft (10).
- 25 6. Implantation catheter (1) according to one of the preceding claims, **characterized** in that the holding element (101) is configured for assuming each of a holding state for holding the implant (2) and a release state for releasing the implant (2), wherein a transition from the holding state to the release state and/or a transition from the release state to the holding state is supported by means of a shape memory of the
30 shape memory element (1011).

7. Implantation catheter (1) according to claim 6, **characterized** in that, when the distal end (10-1) of the first catheter shaft (10) points in a first direction (X), an overall extension of the holding element (10) perpendicular to the first direction (X) is larger in the holding state than in the release state.
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8. Implantation catheter (1) according to one of the preceding claims, **characterized** in that the implantation catheter (1) comprises a second (outer) catheter shaft (12) including a second lumen (123), wherein the first catheter shaft (10) is at least partially guided inside the second lumen (123).
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9. Implantation catheter (1) according to claim 8, **characterized** in that a distal end (12-1) of the second catheter shaft (12) comprises a protective sleeve (125), the protective sleeve (125) being configured for receiving the implant (2).
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10. Implantation catheter (1) according to claim 8 or 9, **characterized** in that a pushing element (104) is arranged at the distal end (10-1) of the first catheter (10), the pushing element (104) being configured for pushing the implant (2) out of the implantation catheter (1).
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11. Implantation catheter arrangement (3), comprising
- an implantation catheter (1) according to one of the preceding claims; and
 - an implant (2) being configured for interlocking with the holding element (101).
12. Implantation catheter arrangement (3) according to claim 11, **characterized** in that
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- the implant (2) is a sensory implant or a therapeutic implant.
13. Method for handling an implant (2) inside a human or animal body, **characterized** in that an implantation catheter arrangement (3) according to claim 11 or 12 is used for at least one of the following:
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- implanting the implant (2);
 - explanting the implant (2);
 - repositioning the implant (2).

14. Method according to claim 13, **characterized** by the following steps:
- a) guiding the implant (2) to a desired implantation site while the implant (2) is attached to the distal end (10-1) of the first catheter shaft (10) by means of the holding element (101);
 - 5 b) releasing the implant (2) at the desired implantation site by changing the shape of the shape memory element (1011).
15. Method according to claim 13 or 14, **characterized** by the following steps:
- c) guiding the distal end (10-1) of the first catheter shaft (10) to the implanted
10 implant (2);
 - d) attaching the implant (2) to the distal end (10-1) of the first catheter shaft (10) by changing the shape of the shape memory element (1011).