CLAIMS:

1. A tissue ablation device, the device comprising:

   a sheath comprising a distal end that is positionable at an ablation site in the tissue, a proximal end and a lumen extending therebetween;

   one or more electrodes that are advanceable and retractable through the lumen, wherein a distal portion of the one or more electrodes is deployable into a tissue ablating configuration from the distal end of the sheath upon advancement, and the one or more electrodes are removable from the lumen via the proximal end of the sheath upon retraction, whereupon the lumen becomes vacated;

   wherein the sheath is configured for a surgical material to traverse the vacated lumen for delivery from the distal end of the sheath into the tissue.

2. The device of claim 1, further comprising a dispenser which is operable to dispense the surgical material into the vacated lumen.

3. The device of claim 2, wherein the dispenser is attachable to the proximal end of the sheath.

4. The device of any one of claims 1 to 3, wherein the one or more electrodes are configured to have a polarity during ablation opposite that of a grounding pad positioned on the body of a patient, whereby ablation occurs between the electrode(s) and the grounding pad.

5. The device of any one of claims 1 to 4, wherein the one or more electrodes are configured to have a polarity during ablation opposite that of an electrically conductive portion of the sheath, whereby ablation occurs between the electrode(s) and the electrically conductive portion of the sheath.

6. The device of any one of claims 1 to 3, wherein the one or more electrodes comprise a plurality of electrodes configured to have opposite polarities during ablation.

7. The device of any one of claims 1 to 6, wherein the or each of the one or more electrodes are configured to assume a predetermined shape upon deployment into the tissue ablating configuration.

8. The device of claim 7, wherein the tissue ablating configuration of the or each of the one or more electrodes is independently circular or helical in shape.

9. The device of any one of claims 1 to 8, wherein the or each of the one or more electrodes have a cross-sectional shape that is independently selected from: circular, a circular segment, elliptical, triangular and flat.

10. The device of any one of claims 1 to 9, wherein the one or more electrodes are configured for single use.

11. The device of any one of claims 1 to 10, wherein the one or more electrodes are formed from a material selected from carbon steel or a nickel-titanium alloy.

12. The device of any one of claims 1 to 11, wherein the sheath is configured for percutaneous insertion into the tissue or for endoscopic insertion into the tissue.

13. The device of any one of claims 1 to 12, wherein the distal end of the sheath is configured to guide an initial direction of deployment of the one or more electrodes.

14. The device of any one of claims 1 to 13, wherein the distal end of the sheath comprises crenulations for guiding an initial direction of deployment of the one or more electrodes.

15. The device of any one of claims 1 to 14, further comprising a deployment handle which is operable to advance and retract the one or more electrodes through the lumen.

16. The device of claim 15, wherein the deployment handle is removably attachable to the tissue ablation device.

17. The device of claim 15 or claim 16, wherein the deployment handle is orientated at an angle to the sheath.

18. A method for ablating tissue at an ablation site in a patient's body, the method being performed using

    a device for ablating tissue, the device comprising:

        a sheath comprising a distal end that is positionable at an ablation site in the tissue, a proximal end and a lumen extending therebetween;

        one or more electrodes that are advanceable and retractable through the lumen, wherein a distal portion of the one or more electrodes is deployable into a tissue ablating configuration from the distal end of the sheath upon advancement, and the one or more electrodes are removable from the lumen via the proximal end of the sheath upon retraction, whereupon the lumen becomes vacated; and

wherein the sheath is configured for a surgical material to traverse the vacated lumen for delivery from the distal end of the sheath into the tissue;

the method comprising positioning the distal end of the sheath in the patient at the ablation site;

deploying the one or more electrodes into the tissue ablating configuration and ablating tissue at the ablation site;

retracting the one or more electrodes back into the sheath and subsequently removing the one or more electrodes from the lumen; and

delivering the surgical material into the patient via the vacated lumen.

19. A method for ablating a lung tumour in a patient, the method being performed using

a device for ablating lung tumours, the device comprising:

a sheath comprising a distal end that is positionable at the lung tumour, a proximal end and a lumen extending therebetween;
one or more electrodes that are advanceable and retractable through the lumen, wherein a distal portion of the one or more electrodes is deployable into a tissue ablating configuration from the distal end of the sheath upon advancement, and the one or more electrodes are removable from the lumen via the proximal end of the sheath upon retraction, whereupon the lumen becomes vacated; and

wherein the sheath is configured for a surgical material to traverse the vacated lumen for delivery from the distal end of the sheath into the tissue;

the method comprising percutaneously positioning the distal end of the sheath at the lung tumour;

deploying the one or more electrodes into the tissue ablating configuration and ablating tissue including the lung tumour;

retracting the one or more electrodes back into the sheath and subsequently removing the one or more electrodes from the lumen; and

dispensing tissue glue into and through the vacated lumen as the sheath is partially withdrawn out of the patient, whereby a hole between the patient’s lungs and pleural cavity is sealed.

20. A method for ablating tissue at an ablation site in a patient's body, the method being performed using

a device for ablating tissue, the device comprising:

a sheath comprising a distal end that is positionable at an ablation site in the tissue, a proximal end and a lumen extending therebetween; and

one or more electrodes that are advanceable and retractable through the lumen, wherein a distal portion of the one or more electrodes is deployable into a tissue ablating configuration from the distal end of the sheath upon advancement;

the method comprising positioning the distal end of the sheath in the patient at the ablation site, and a grounding pad on the patient's body;

deploying the one or more electrodes into the tissue ablating configuration in the ablation site; and

causing ablation to occur wherein, during ablation:

at least one of the one or more electrodes is caused to have a polarity that is opposite to that of the grounding pad, and

an electrically conductive portion of the sheath or another of the one or more electrodes is caused to have a polarity that is the same as that of the grounding pad,

whereby ablation progresses according to a relative impedance of tissue at the ablation site.