CLAIMS:

1. A probe for use in targeted ablation of tissue within a subject, comprising a transducer, and first and second control lines,

the transducer having a plurality of distinct shape elements, wherein each shape element is shaped to correspond to at least one other shape element,

wherein the transducer has a first orientation in which the shape elements are aligned in a substantially elongate manner adapted for insertion into the subject, and the transducer has a second orientation in which the corresponding shapes of the shape elements are combined together to form a transducer surface shaped to focus ultrasound waves onto an area of tissue of the subject to be ablated,

wherein the control lines are configured such that tensioning of the first control line causes the transducer to change from the first to the second orientation, and tensioning of the second control line causes the transducer to change from the second to the first orientation.

2. The probe according to claim 1, wherein selective tensioning of the first and second control lines is utilised to control the motion of the shape elements between the orientations.

3. The probe according to claim 1 or claim 2, further comprising at least one hinge, wherein said at least one hinge connects adjacent shape elements.

4. The probe according to claim 3, further comprising at least one biasing element, preferably in the form of a spring, wherein said at least one biasing element biases the transducer to one of the first orientation or the second orientation.

5. The probe according to claim 4, wherein said at least one hinge is a biasing element in the form of a torsion spring.

6. The probe according to claim 5, wherein one of said control lines is the biasing element.

7. A probe for use in targeted ablation of tissue within a subject, comprising:

a transducer having a plurality of distinct shape elements, wherein each shape element is shaped to correspond to at least one other shape element,

wherein the transducer has a first orientation in which the shape elements are aligned in a substantially elongate manner adapted for insertion into a subject, and the transducer has a second orientation in which the corresponding shapes of the shape elements are combined together to form a transducer surface shaped to focus ultrasound waves onto an area of tissue of the subject to be ablated;

at least one hinge connecting adjacent shape elements;

at least one biasing element positioned between adjacent shape elements, said biasing element being configured to bias the transducer towards one of the first and second orientations; and

a control mechanism configured, when activated, to act against the bias of the biasing element to change the transducer from the first to the second orientation or from the second orientation to the first orientation.

8. The probe according to claim 7, wherein the control mechanism includes at least one motor.

9. The probe according to claim 7 or claim 8, wherein said at least one hinge comprises said at least one biasing element.

10. The probe according to any one of claims 7 to 9 wherein said at least one biasing element is a spring.

11. The probe according to claim 10, wherein the spring is a torsion spring.

12. The probe according to any one of the preceding claims, wherein each shape element includes a concave front surface, and in the second orientation the transducer resembles a dish.

13. The probe according to any one of claims 3 to 12, wherein the plurality of shape elements are connected together by at least one hinge which extends in the longitudinal direction of the probe.

14. The probe according to claim 12 or claim 13, wherein the transducer comprises a plurality of part-circular shape elements connected together by said at least one hinge.

15. The probe according to any one of claims 3 to 12, wherein the plurality of shape elements are connected together by at least one hinge which extends in the lateral direction of the probe.

16. The probe according to claim 15, wherein the plurality of shape elements are connected together in such a manner as to form an elongate arrangement of shape elements in the first orientation, and wherein, in the second orientation, the plurality of shape elements form a substantially circular focusing arrangement.

17. The probe according to any one of the preceding claims, wherein the shape elements are each polygonal in one cross-section.

18. The probe according to claim 17, wherein the shape elements are hexagonal in said cross-section, and the transducer in the second orientation is in the form of a hexagonal ring.

19. A probe for use in targeted ablation of tissue within a subject, comprising a transducer, the transducer having a plurality of distinct shape elements, wherein each shape element is shaped to correspond to at least one other shape element, and wherein each shape element comprises a magnetic element,

wherein the transducer has a first orientation in which the shape elements are aligned in a substantially elongate manner adapted for insertion into a subject, and the transducer has a second orientation in which the corresponding shapes of the shape elements are combined together to form transducer surface shaped to focus ultrasound waves onto an area of tissue of the subject to be ablated,

wherein the magnetic elements are configured to change the transducer from the first orientation to the second orientation by bringing together opposed magnetic poles of adjacent shape elements.

20. The probe according to claim 19, wherein each magnetic element is an electromagnet which can be energised to change the transducer from the first orientation to the second orientation.

21. The probe according to claim 20, wherein each shape element is connected to a distinct power line which supplies energy to energise the magnetic element.

22. The probe according to claim 20 or 21, wherein the shape elements are selectively energised in a sequence to progressively change from the first orientation of the transducer to the second orientation.

23. The probe according to any one of claims 19 to 22, wherein the shape elements are elongate members and are adapted to be inserted into the subject one after the other or individually.

24. The probe according to any one of the preceding claims, wherein the transducer includes at least one transducer element adapted to generate image ultrasound waves and configured to determine one or more of: an orientation state of the probe, a location of the probe, a relative position of the probe, an orientation state of a shape element, a location of a shape element or a relative position of a shape element, and/or configured for use in guiding the probe during insertion into the subject.

25. The probe according to claim 24, wherein at least one said shape element comprises at least one said transducer element.

26. The probe according to any one of the preceding claims, further comprising at least one sensor which is adapted to send signals representative of the orientation of the transducer.

27. The probe according to claim 26, wherein the at least one sensor is further adapted to send signals representative of the position and/or location of the transducer within the subject.

28. The probe according to claim 26 or 27, wherein each shape element includes one of the sensors.

29. The probe according to any one of the preceding claims, wherein the probe is a high intensity focused ultrasound (HIFU) probe and the transducer is adapted to emit a focused ultrasound waves when in the second orientation.

30. A method of use of an ultrasonic probe, comprising the following steps:

A) providing the probe according to any one of claims 1 to 29, the probe in the second orientation having the transducer surface and being adapted to generate a focused beam of ultrasonic waves;

B) generating and focusing ultrasonic waves onto a first target region for a predetermined period of time;

C) generating and focusing ultrasonic waves onto a plurality of other target regions in turn for the predetermined period of time until each of the first target region and other target regions has been partially ablated for the predetermined period of time to complete a cycle; and

D) repeating steps B and C until a predetermined number of cycles has been completed.

31. The method according to claim 30, comprising a pause period between each predetermined period of time in which the respective target region receives the ultrasonic waves, each pause period being a period of time where no ultrasonic waves are generated.

32. The method according to claim 30 or 31, wherein the first target region and other target regions form a first portion of a target volume, and wherein the target volume comprises a second portion having a plurality of second target regions, and wherein the method further comprises:

E) generating and focusing ultrasonic waves onto the plurality of second target regions in turn for a predetermined period of time until each of the first target region and other target regions has been partially ablated for the predetermined period of time to complete a cycle; and

D) repeating step E until a predetermined number of cycles has been completed.

33. The method according to claim 32, comprising a pause period between each predetermined period of time in which the respective second target region receives the ultrasonic waves, each pause period being a period of time where no ultrasonic waves are generated.