

CLAIMS

What is claimed is:

1. An airway support device comprising:
a first longitudinal strip for attachment to a first region of cartilage;
a first lateral strip extending from the first longitudinal strip and having multiple first attachment members;
a second longitudinal strip for attachment to a second region of cartilage; and
a second lateral strip extending from the second longitudinal strip and having a second attachment member, wherein the second attachment member is configured to selectively engage one of the first attachment members to connect the first lateral strip to the second lateral strip in a corresponding one of multiple adjustable configurations.
2. The airway support device of claim 1, wherein:
the first longitudinal strip and the first lateral strip are formed from a first mesh;
and
the second longitudinal strip and the second lateral strip are formed from a second mesh.
3. The airway support device of claim 1, wherein:
the first attachment members comprise protrusions; and
the second attachment member comprise an opening.
4. The airway support device of claim 1, wherein:
the first attachment members comprise openings; and
the second attachment member comprises a protrusion.
5. The airway support device of claim 1, wherein the first lateral strip comprises a terminal end having a tapered shape.

6. The airway support device of claim 1, wherein the first lateral strip comprises a thread defining a terminal end of the first lateral strip opposite the first longitudinal strip.
7. The airway support device of claim 1, further comprising suture markers along the first longitudinal strip and the second longitudinal strip, the suture markers indicating a target location for a suture.
8. The airway support device of claim 1, wherein the airway support device comprises fabrics forming a mesh, the fabrics being fluorescent.
9. An airway support device comprising:
 - a first longitudinal strip for attachment to a first region of cartilage;
 - multiple first lateral strips, each of the first lateral strips extending from the first longitudinal strip and having a first attachment member;
 - a second longitudinal strip for attachment to a second region of cartilage; and
 - multiple second lateral strips, each of the second lateral strips extending from the second longitudinal strip and having a second attachment member;wherein each of the first attachment members is configured to engage a corresponding one of the second attachment members to hold the first longitudinal strip with respect to the second longitudinal strip with tension across the first lateral strips and the second lateral strips.
10. The airway support device of claim 9, wherein each of the first lateral strips is connectable to a corresponding one of the second lateral strips in a configuration that is independent of every other pair of first lateral strips and second lateral strips.
11. The airway support device of claim 9, wherein each of the first lateral strips is adjustably connectable to a corresponding one of the second lateral strips with a tension that is independent of a tension across every other pair of first lateral strips and second lateral strips.
12. The airway support device of claim 9, wherein:

the first longitudinal strip and the first lateral strip are formed from a first mesh;
and
the second longitudinal strip and the second lateral strip are formed from a second mesh.

13. The airway support device of claim 9, wherein:
the first region of cartilage is on a first side of a trachea;
the second region of cartilage is on a second side of the trachea;
the first lateral strips are first tracheal lateral strips; and
the second lateral strips are second tracheal lateral strips;
14. The airway support device of claim 9, further comprising:
multiple first bronchial lateral strips, each of the first bronchial lateral strips extending from the first longitudinal strip and having a first bronchial attachment member;
multiple second bronchial lateral strips, each of the second lateral strips extending from the second longitudinal strip and having a second bronchial attachment member;
a third longitudinal strip for attachment to a first region of bronchial cartilage;
multiple third bronchial lateral strips, each of the third lateral strips extending from the third longitudinal strip and having a third bronchial attachment member;
a fourth longitudinal strip for attachment to a second region of bronchial cartilage;
and
multiple fourth lateral strips, each of the fourth lateral strips extending from the fourth longitudinal strip and having a fourth bronchial attachment member;
wherein each of the first bronchial attachment members is configured to engage a corresponding one of the third bronchial attachment members; and
wherein each of the second bronchial attachment members is configured to engage a corresponding one of the fourth bronchial attachment members.

15. The airway support device of claim 14, wherein the third longitudinal strip and the fourth longitudinal strip are connected to form a continuous strip.

16. A method of implanting an airway support device, the method comprising:
attaching a first longitudinal strip to a first cartilage region;
attaching a second longitudinal strip to a second cartilage region; and
connecting a first lateral strip extending from the first longitudinal strip to a second lateral strip extending from the second longitudinal strip, wherein tension across the first lateral strip and the second lateral strip holds the first cartilage region and the second cartilage region a distance away from each other.
17. The method of claim 16, further comprising attaching the first lateral strip or the second lateral strip to an airway wall connecting the first cartilage region and the second cartilage region together.
18. The method of claim 16, wherein:
the distance is a first distance; and
the method further comprises adjusting the tension across the first lateral strip and the second lateral strip to hold the first cartilage region and the second cartilage region a second distance away from each other, the second distance being different than the first distance.
19. The method of claim 16, wherein:
the first cartilage region is a first tracheal cartilage region;
the second cartilage region is a second tracheal cartilage region;
the method further comprises:
attaching the first longitudinal strip to a first region of bronchial cartilage extending from the first tracheal cartilage region;
attaching the second longitudinal strip to a second region of bronchial cartilage extending from the second tracheal cartilage region;
attaching a third longitudinal strip to a third region of bronchial cartilage;
attaching a fourth longitudinal strip to a fourth region of bronchial cartilage,
the third region of bronchial cartilage and the fourth region of bronchial cartilage

being between the first region of bronchial cartilage and the second region of bronchial cartilage;

connecting a third lateral strip extending from the first longitudinal strip to a fourth lateral strip extending from the third longitudinal strip; and

connecting a fifth lateral strip extending from the second longitudinal strip to a sixth lateral strip extending from the fourth longitudinal strip.

20. The method of claim 19, wherein the third longitudinal strip and the fourth longitudinal strip are connected to form a continuous strip.