

CLAIMS

1. A protective assembly for use during laparoscopic surgery, the assembly comprising: a thin membrane formed from non-toxic material, the membrane being sufficiently thin and maneuverable to be passed through a cannula of a trocar; a flexible connector extending from the thin membrane; the flexible connector being fused with the membrane and formed entirely from the same material as the thin membrane; and an insertable plunger to facilitate insertion of the membrane into the cannula and subsequently pass the membrane through an outlet of the cannula to allow the membrane to be spread over internal organs of a patient, the plunger comprising an insertable shaft dimensioned to be inserted and passed through the cannula wherein a distal portion of the insertable shaft is fixedly anchored to the flexible connector, wherein the flexible connector is connected to a point of attachment on a peripheral portion of the membrane to facilitate withdrawal of the membrane out of the cannula of the trocar upon pulling the flexible connector, wherein the flexible connector extends only from the point of attachment at a convergent section of the peripheral portion of the membrane to the plunger such that the convergent peripheral portion converges generally in a direction towards the insertable shaft to facilitate rolling or folding of the membrane when pulled into the cannula of the trocar during use.
2. A protective assembly in accordance with claim 1, wherein a proximal portion of the insertable shaft comprises an enlarged head to limit inward movement of the insertable shaft into the cannula of the trocar and prevent the insertable shaft from falling through the trocar.
3. A protective assembly in accordance with any one of the preceding claims, wherein the membrane comprises a plurality of fold regions to facilitate rolling or folding of the membrane to allow the membrane to pass through the cannula in a folded configuration.
4. A protective assembly in accordance with any one of the preceding claims, wherein the membrane comprises at least two linear peripheral portions that are substantially transverse to each other.
5. A protective assembly in accordance with claim 4, wherein the at least two linear peripheral portions are connected by at least one curved bridging portion to orient the at least two linear peripheral portions in a transverse configuration.
6. A protective assembly in accordance with claim 5, comprising a first curved bridging portion of the at least one curved bridging portion with a first arc length and a second curved bridging portion of the at least one curved bridging portion with a second arc length such that the first arc length is smaller than the second arc length to define a wing shaped section of the membrane.
7. A protective assembly according to claim 4, wherein the at least two linear peripheral portions are perpendicular to each other.
8. A protective assembly in accordance with any one of the preceding claims, wherein width of the flexible connector is substantially less than overall width of the membrane.
9. A protective assembly in accordance with any one of the preceding claims, wherein

length of the flexible connector is greater than length of the cannula of the trocar.

10. A protective assembly in accordance with claim 9, wherein the length of the flexible connector is at least twice the length of the cannula of the trocar.

11. A protective assembly in accordance with any one of the preceding claims, wherein the membrane comprises opposed major membrane surfaces separated by thickness of the membrane, each of the membrane surfaces comprising rows of projections and recesses such that any two adjacently located projections are separated by a recess.

12. A protective assembly in accordance with claim 11, wherein each of the recesses on one of the membrane surfaces is shaped to form a trough and aligned with a projection of the rows of projections and recesses on the other of the major membrane surfaces.

13. A protective assembly in accordance with claim 12, wherein each of said projections on the membrane surfaces of the membrane extend generally in a transverse direction relative to a direction of the rows of the projections and recesses.

14. A protective assembly in accordance with any one of claims 11 to 13, wherein average height of the projections is substantially equal to average depth of the recesses.

15. A protective assembly in accordance with any one of claims 11 to 14, wherein the thickness of a portion of the membrane in between the any two adjacently located projections separated by a recess is substantially less than or equal to average height of the projections and/or average depth of the recess.

16. A protective assembly in accordance with any one of claims 11 to 15, wherein portions of the membrane between the any two adjacent projections separated by a recess facilitate folding or rolling of the membrane in a folded configuration.

17. A protective assembly in accordance with any one of the preceding claims, wherein the membrane is sufficiently heat tolerant to reduce or minimize accidental damage from ablation.

18. A protective assembly in accordance with any one of the preceding claims, wherein width of the membrane gradually broadens from the point of attachment of the flexible connector on the membrane.

19. A protective assembly in accordance with any one of the preceding claims, wherein length of the flexible connector is adjustable.