Claims:

1. Use of hexyl 5-ALA ester (HAL) or a pharmaceutically acceptable salt thereof in the manufacture of a medicament for the photodynamic therapy of bladder cancer, wherein said medicament is in the form of an aqueous solution comprising said HAL or said pharmaceutically acceptable salt thereof in a concentration of 0.1 to 5% by weight of the total weight of the medicament, wherein said medicament is to be instilled into the bladder of a patient in need of such therapy and the inside of said bladder is to be exposed to blue light having a fluence rate of 1.5 to 12.5 mW/cm^2, and wherein the blue light is provided at a light dose of 0.2 to 15.0 J/cm^2.

2. Use according to claim 1, wherein the inside of the bladder is exposed to blue light having a fluence rate of 2.5 to 7.0 mW/cm^2.

3. Use according to claim 2, wherein the blue light is provided at a light dose of 0.3 to 8.0 J/cm^2.

4. Use according to any of claims 1 to 3, wherein the inside of said bladder is further exposed to white light having a fluence rate of 3.0 to 22.0 mW/cm^2.

5. Use according to claim 4, wherein said white light is provided at a light dose of 0.4 to 26.5 J/cm^2.

6. Use according to claim 4, wherein said inside of the bladder is exposed to white light having a fluence rate of 5.0 to 12.5 mW/cm^2.

7. Use according to claim 6, wherein said white light is provided at a light dose of 0.6 to 15.0 J/cm^2.

8. Use according to any of claims 1 to 7, wherein said medicament is a solution of HAL in an aqueous buffer, preferably a solution of HAL in a phosphate buffer.

9. Use according to claim 8, wherein the pH of said medicament is in the range of 4.5 to 7.5, preferably in the range of 5.7 to 7.2.

10. Use according to any of claims 1 to 9, wherein said medicament is a solution of 2 mg/ml HAL hydrochloride in an aqueous buffer comprising disodium phosphate dihydrate, potassium dihydrogen phosphate, sodium chloride, hydrochloric acid, sodium hydroxide and water.

11. Use according to any of claims 4 to 10, wherein said inside of the bladder is first exposed to white light and then to blue light.

12. Use according to any of claims 1 to 11, wherein a blue-light cystoscope is used as a light source to provide blue light or said blue and white light.

13. Use according to claim 12, wherein said blue-light cystoscope is a commercially available blue-light cystoscope.

14. Use according to any of claims 1 to 13, wherein the inside of the bladder is exposed to blue light or to blue and white light for a period of 2 to 20 minutes.

15. Use according to any of claims 1 to 14 wherein said photodynamic therapy is an adjuvant therapy in the treatment of bladder cancer.

16. Use according to claim 15, wherein said bladder cancer is non-muscle-invasive bladder cancer (NMIBC) and said photodynamic therapy is to be simultaneously carried out with a transurethral resection of NMIBC.

17. Use according to claim 15, wherein said bladder cancer is NMIBC and said photodynamic therapy is carried out in a patient having undergone transurethral resection of NMIBC.

18. Use according to claims 15 to 17, wherein said photodynamic therapy replaces or partially replaces other adjuvant therapies.

19. Use according to claim 18, wherein said other adjuvant therapies are chemotherapy and/or immunotherapy, preferably Bacillus Calmette-Guérin (BCG) treatment.

20. Use according to claims 1 to 15, wherein said photodynamic therapy is carried out in BCG refractory patients.

21. Use according to any of claims 1 to 14, wherein said photodynamic therapy is a neoadjuvant therapy in the treatment of bladder cancer.

22. Use according to claim 21, wherein said bladder cancer is muscle-invasive bladder cancer (MIBC).

23. Use according to claim 22, wherein said photodynamic therapy is carried out prior to a cystectomy.

24. Use according to claim 23, wherein the cystectomy is carried out directly after the photodynamic therapy.