

# Observational Report on SPDT Patients' Treatment

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This is a list of all 116 patients who have undergone PDT/SDT since 2005. There were few cases lost to follow-up.

The median survival times were suggested by the patient's Oncologist.

The ages stated are the patient's age at the time of treatment.

The overall conclusion from this list is that repeating PDT/SDT on many of these patients, following the first treatment course, would definitely produce a treatment advantage; the time interval between the courses being judged on a clinical basis. Those patients with large tumour mass have to be treated carefully under steroid cover and in some cases the treatment course needs to be fractionated. This is because tumour cell death with PDT/SDT happens rapidly and is always followed by an inflammatory response due to tumour cell necrosis. Combining PDT/SDT with chemotherapy has been found to give better tumour cell destruction than with chemotherapy alone.

The issue of tumour recurrence remains of significance in metastatic cancer, for any method of tumour cell destruction, be it chemotherapy, radiotherapy or Photodynamic/Sonodynamic Therapy.

Photodynamic/Sonodynamic Therapy is clearly an effective treatment as it does not have the downside of chemotherapy and radiotherapy and is therefore a realistic option for these patients following failure of conventional treatment approaches. Using sonodynamic therapy has enabled the penetration of bone.

The majority of patients coming for Photodynamic/Sonodynamic Therapy were reluctant to spend funds on regular scans, therefore before and after PET CT scans, the ideal method of scanning pre and post PDT/SDT, was not available for these patients, as they preferred to spend their funds on the treatment process.

	<i>Male/Female</i>	<i>Age</i>	<b>BLADDER CANCER</b>
1	Male	50	December 2007 - transitional cell carcinoma of the bladder, blocking the right ureter, producing a right hydronephrosis. From a conventional point of view, radical surgery (cystectomy) was the recommended course of action, but he flatly turned this down partly because his wife is chronically ill and he has to look after her and such an operation would involve him being in hospital for several weeks. He underwent PDT/SDT during February 2008 and he coped with this well. When last seen in February 2009, he had not had an operation, the blockage to the right ureter had resolved and he has been passing bits of necrotic tumour. Median survival time unknown.
2	Female	69	February 2008. - transitional cell carcinoma of the bladder with a secondary in the left scapula. The scapula secondary became clinically obvious in late 2007. The bladder cancer was diagnosed in July 2006. She had surgery to the bladder (not a cystectomy) in November 2006. At presentation she had recurrence in the left scapula and also in the bladder. Her median survival was 6 months. She underwent PDT/SDT with Dexamethasone cover, 2 milligrams twice daily. The scapula secondary became more painful initially due to the local inflammatory response, but on examining it 3 months post-PDT it had decreased in size by 50%. She developed bladder symptoms and these appeared as stones in the bladder (calciums attracted to cancer cells) and she was clearly passing some necrotic tumour from the bladder. This patient died in February 2009.

### **BRAIN TUMOURS**

3	Female	50	April 2008 - massive ependymoma; she had had surgical debulking and radiotherapy. Her tumour was diagnosed in 2003. She had been offered Temozolomide but did not wish to take this up. PDT/SDT was carried out in April 2008, under Dexamthasone cover. Initially her clinical state was poor and her median survival time was 6 months. A month after PDT/SDT she went on a 2 month safari with her husband to Africa. She has remained relatively symptom free and had another 2 week course of PDT/SDT in October 2008. Repeat scans shows that the tumour
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			has decreased in size; the scans were done in December 2008. Last seen in February 2009, she was well and symptom free.
4	Male	56	September 2005 - left temporal lobe glioblastoma multiforme. This patient had a median survival time of 2 months. The tumour was recurrent following a partial resection in January 2005. He had PDT/SDT in November 2005. This patient died in January 2006.
5	Male	66	March 2005 - glioblastoma multiforme in the left temporal area, which was diagnosed in January 2005. He had had whole-brain radiotherapy at the end of March 2005. He underwent PDT/SDT in August 2005. At the time of treatment his median survival time was 3 months. He died in December 2006.

### **BREAST CANCER**

6	Female	41	July 2005 - metastatic breast cancer with multiple bony metastases. Her median survival time was 18 months. It was an oestrogen positive tumour, but she refused Tamoxifen. She had PDT/SDT in August 2005. This patient died in December 2008.
7	Female	41	July 2005 - right-sided intraductal breast cancer; oestrogen receptor negative, HER2 negative. She was offered neo-adjuvant chemotherapy, then a lumpectomy with a sentinel node biopsy and possible radiotherapy post-surgery. She refused neo-adjuvant chemotherapy and radiotherapy, but decided on neo-adjuvant PDT/SDT. This was carried out in August 2005. She had a lumpectomy and the tumour consisted of necrotic tissue with no active tumour seen. The sentinel node biopsy was clear of tumour. At the time of writing she is recurrence free.
8	Female	67	September 2005. In 2002 she developed a Grade 3 left-sided breast cancer, oestrogen negative and HER2 negative. She had a right sided mastectomy in 2002. She then developed DCIS in May 2003 and had chemotherapy for this which was helpful. In 2003 she had a prosthesis put into the left breast and this prosthesis was removed in July 2005. She presented with a large tumour in the right breast (recurrent). In the left breast she had a wide area of granulation tissue where the left sided prosthesis had been removed. There was an 'open area'. She underwent PDT/SDT in September 2005. Her median survival initially was one year. This patient survived at least 2 years, but since that time she has been lost to contact.
9	Female	52	August 2005, - multiple bony secondaries from breast cancer. PDT/SDT was carried out in

			August 2005. During the PDT/SDT the pain in the hip and back disappeared. The pain then returned, but nothing like as bad as it had been previously. This patient's median survival time was 2 years. This patient died in November 2008.
10	Female	49	October 2005 - widespread metastatic breast cancer. PDT/SDT in October 2005. At that time her median survival was 3 months. She died at the end of February 2006.
11	Female	51	June 2005 - widespread metastatic breast cancer, extending over both breasts and around the back of the chest. She underwent PDT/SDT in October 2005. This patient has been lost to follow up.
12	Female	55	November 2005 - metastatic breast cancer with bony metastases. Her median survival time at that point was 2 months. She underwent PDT/SDT November 2005. She died on 24 December 2005.
13	Female	56	December 2005 - metastatic breast cancer, with several bony metastases and also a lung secondary. Her median survival time at the time of seeing her was 6 months. She had PDT/SDT in January 2006. This patient died in August 2006.
14	Female	53	March 2006 - metastatic breast cancer, with several bony metastases. She had PDT/SDT in April 2006. Her median survival time on first seeing her was 2 years. At the time of writing (Feb 2009), she has stable disease.
15	Female	51	March 2006 - breast cancer, with multiple bone metastases. She had PDT/SDT in April 2006. Her median survival time was one year. The pain in the bony metastases increased during the PDT/SDT and this pain settled some 4-6 weeks after post-PDT. This patient died in November 2006, having developed brain metastases.
16	Female	30	October 2005, - widespread metastatic breast cancer with bone metastases and liver metastases. Her median survival time at the time of her first appointment was 3 months. She had PDT/SDT January 2006. This patient has been lost to follow up.
17	Female	57	June 2006 - metastatic breast cancer with multiple bone metastases and also metastases in the liver and a cutaneous metastase on the right side of the chest and also brain metastases. Her median survival time was 3 months. She underwent PDT/SDT in July 2006. This patient died in December 2006.
18	Female	50	September 2006 - left sided breast cancer, diagnosed in August 2004. She refused any conventional treatment and had been treating herself with alternative therapies ever since her diagnosis. She came requesting PDT/SDT. She refused a bone scan or a CT scan. Her median survival time was one year. She underwent PDT/SDT in Sept 2006. Post-PDT/SDT the tumour

			in the breast increased in size due to an inflammatory reaction and this gradually settled over a period of 3-4 months. Patient died in July 2008.
19	Female	67	September 2006 - metastatic breast cancer, with widespread bony metastases and several liver metastases. Her median survival time was 3 months. She had PDT/SDT in September 2006, under Dexamethasone cover (2 milligrams twice daily). There was increased pain in the bony metastases post-PDT/SDT but this settled down some 6 weeks following PDT/SDT. This patient died in February 2007.
20	Female	41	September 2006, - a recurrent breast cancer in the scar following a lumpectomy, which was carried out in 2001. Post PDT/SDT the recurrence contracted down to two-thirds of the size it was previous to PDT/SDT. Median survival time at the time of first seeing her was unknown. This patient has been lost to follow up.
21	Female	53	October 2006 - metastatic breast cancer, with several bony metastases. She had PDT/SDT in November 2006 and for a month following that, the bone metastases were more painful. The PDT/SDT was carried out under Dexamethasone cover (2 milligrams twice a day). Her median survival time at the time of first seeing her was 2 years. At the time of writing she has stable disease. Further bone scans have shown that all the bony metastases ceased to progress since the PDT/SDT.
22	Female	51	November 2006 - breast cancer with several bony metastases. She underwent PDT/SDT and had increased pain following the treatment. Her median survival time was 2 years from the date of first seeing her. At the time of writing she has stable disease.
23	Female	47	January 2007 - metastatic breast cancer, with several skin metastases and one bony metastases. Median survival time was one year. She had PDT/SDT on her in March 2007. She died in May 2008.
24	Female	51	February 2007 - left sided breast cancer operated on with mastectomy in January 2007. This was oestrogen receptor negative, node negative and HER2 positive. She was recommended to have chemotherapy post surgery but she turned this down. Instead she wanted to do PDT/SDT which she had in April 2007. At the time of writing she is alive and well and tumour free.

25	Female	38	Presented with metastatic breast cancer with several liver metastases and bone metastases. At the time of seeing her her median survival time was 6 months. She underwent PDT/SDT in May 2007. This patient died in December 2007.
26	Female	67	August 2007 - extensive recurrent breast cancer, following a right sided mastectomy in 2002,

			followed by chemotherapy and radiotherapy in 2002. She was oestrogen receptor positive, node positive and HER2 positive. Her median survival time was two years. She underwent PDT/SDT in August 2007. This was covered with Dexamethasone, 2 milligrams twice daily. She developed a big inflammatory response to tumour cell death and this gradually settled down over a period of 2-3 months and this cleared 80% of the tumour. Because there was so much tumour mass over the chest, she had another course of PDT/SDT in December 2007 and a significant proportion of the remaining tumour was killed off. In July 2008 she had a recurrence in the left breast and in areas of skin below the left breast. A further course of PDT/SDT, again showed a good response. Currently she has stable disease.
27	Female	57	October 2007 - right sided breast cancer, with distant metastases in the brain and the lung. Her median survival time on seeing her was 3 months. She had PDT/SDT in October 2007. She died in January 2008.
28	Female	47	November 2007 - metastatic right sided breast cancer, with several bony metastases and metastases in the right lung. On seeing her her median survival time was 3 months. She had PDT/SDT in November 2007, under Dexamethasone cover. Initially her bone metastases produced more pain for 3 weeks post-PDT and then this improved radically. She also had a cough pre-PDT/SDT from the lung metastases in the right lung and this was significantly better a month after PDT/SDT. This patient died in March 2008.
29	Female	53	This patient initially presented in April 2005. She had had a Grade 3 tumour in the left breast, treated by lumpectomy; this was oestrogen receptor positive. At the time she turned down chemotherapy, radiotherapy and Tamoxifen. She was offered Ukraine (Chelidonium Majus & Thiotepa) in order to reduce her risk of recurrence. In February 2008 she developed a small quarter inch diameter recurrence in the scar. She refused conventional treatment and decided to do PDT/SDT. A month after PDT/SDT this tumour had halved in size. She then had it removed surgically and the pathology report showed that it contained only necrotic cells and no active tumour.
30	Female	47	March 2008 - left sided breast cancer; oestrogen receptor negative and HER2 positive. When seen again in June 2008 she was on Herceptin. She had had a mastectomy in 2008 but refused chemotherapy and radiotherapy. She had liver metastases. She had been offered Taxol, but was unsure as to whether to take this up. She underwent PDT/SDT in July 2008. She went on to Taxol in September 2008 and a further scan in September 2008 showed significant improvement. She was last seen mid-January 2009 and the liver secondaries had, on scan, reduced in size and she was generally feeling well, but she still had some active tumour in the

			left breast. At that time she was considering doing another course of PDT/SDT.
31	Female	46	June 2008 - recurrence of breast cancer which had occurred 12 years previously in the right breast. At that time she had a lumpectomy and lymph-gland resection, followed by chemotherapy and radiotherapy. This time her recurrence was on the left side and started with pain in the arm. She had been offered a mastectomy, but refused this. She was also offered chemotherapy, which she agreed to. She had had breast implants put into both breasts. She refused a whole body CT and bone scan. She did one week of PDT/SDT in July 2008. This patient has been lost to follow up.
32	Female	60	June 2008 - metastatic breast cancer with metastases in the femur and both lungs. At the time of first seeing her median survival time was 6 months. She had PDT/SDT in 2008. At the time of writing she is in reasonable health and has stable disease.
33	Female	47	This patient had left sided breast cancer; oestrogen negative and HER2 positive, diagnosed in March 2008. She had a left sided mastectomy at the end of April 2008. Chemotherapy and radiotherapy were recommended, as was Herceptin. At the end of May 2008, the scan showed spread to the liver. She refused chemotherapy and radiotherapy, but decided to have Herceptin. At the end of May 2008 she was found to have secondaries in the liver and also a recurrence in the lymph node in the left axilla. She underwent PDT/SDT at the end of July 2008. In December 2008, on CT scan, the liver metastases were found to be stable. She was put on Docetaxol in September 2008. She had a median survival time on first seeing her, of one year. At the moment she has stable disease and was last seen in mid-January 2009.
34	Female	55	September 2008 - metastatic breast cancer with metastases in the liver, lymph nodes, bones and lung. Her median survival time at the first appointment was 3 months. She had PDT/SDT in September 2008, under Dexamethasone cover. At the time of writing the patient is still alive and has good quality of life.
35	Female	41	November 2008 - oestrogen receptor negative, HER2 negative, right sided breast cancer. She had had a wide local excision. She was recommended to have chemotherapy and radiotherapy, but she turned this down. She was node negative. She wished to do PDT/SDT, which was carried out in December 2008. At the time of writing the patient is well and tumour free.
36	Female	62	December 2008 - recurrent breast cancer, nineteen years after a wide local excision of her breast cancer and radiotherapy to the left breast. She presented with a 2 month history of constant pain and visual disturbance on upward gaze in the right eye. A CT revealed a secondary encasing the anterior third of the right optic nerve. She had multi-focal sclerotic

			<p>lesions in the skull base and cervical spine. None of these secondaries were amenable to surgical intervention. Her median survival time at the time of seeing her was 6 months. She underwent PDT/SDT in December 2008 under Dexamethasone cover. Within one week of this treatment the pain in her right eye had eased to a mild ache and her visual disturbance had started to ease. She had a wheeze pre-PDT/SDT which started to improve post-PDT/SDT and her exercise ability has improved from having to stop whilst climbing a flight of stairs pre-PDT/SDT, to be able to walk for 30 mins at a time. This was 3 weeks post-follow up to PDT/SDT.</p>
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### **CERVICAL CANCER**

37	Female	51	<p>January 2007 - recurrent carcinoma of the cervix, with a large recurrence in the pelvis and a stent in the right ureter. The mass in the right side of her pelvis was causing significant swelling in the right leg. She had PDT/SDT in March 2007 and at this time her median survival time was 2 months. This treatment was administered for one week only because of her clinical condition. Her right leg became more swollen post-PDT/SDT due to the inflammatory response of the tumour mass in the pelvis. This patient died in mid July 2007.</p>
38	Female	51	<p>February 2008 - recurrent cervical cancer that had spread into the pelvis. At the time she had been offered chemotherapy and radiotherapy which offered a 70% chance of cure. but she refused this option. She underwent PDT/SDT in March 2008, with which she coped well. Eventually her Oncologist persuaded her to have chemotherapy and radiotherapy which she had in autumn 2008. Currently she is tumour free. It is difficult to determine whether the chemotherapy/radiotherapy or PDT/SDT, or a combination of the two, was responsible for her improvement.</p>
39	Female	50	<p>November 2008 - recurrent cervical cancer, with a tumour in the pelvis and para-vertical nodes. She didn't wish to have chemotherapy. She had had previous chemotherapy with which she coped badly. She had PDT/SDT in November 2008 under Dexamethasone cover. A week after PDT/SDT she developed discomfort in the pelvic mass and the groin glands had swelled up due to the inflammatory response, as a result of tumour cell necrosis. Other than that, she has continued to improve. Her median survival time at the time of seeing her was 6 months. She was last seen in January 2009, when she was in reasonable health clinically, with a good quality</p>

			of life.
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### **COLORECTAL CANCER**

40	Female	64	Patient presented with metastatic colorectal cancer, with liver metastases. She was treated with PDT/SDT in August 2005, at which time her median survival time was 3 months. The patient died in October 2005.
41	Male	56	October 2005 - metastatic colorectal cancer with several liver metastases. He had been offered Irinotecan but decided not to accept this. His median survival time at the first appointment was 6 months. He had PDT/SDT in August 2005. This patient has been lost to follow up.
42	Female	66	October 2005 - she had had colorectal cancer diagnosed in 2003 and was treated with a hemicolectomy. On routine scanning in September 2005, she was found to have lung metastases in the left upper lobe. She had a left upper lobectomy to remove these tumours, and at that time she was recommended to have neo-adjuvant chemotherapy, but refused. She wished to do PDT/SDT which she had done in January 2006. At the time of writing this patient is alive and well and is cancer free.
43	Female	64	This patient had metastatic colorectal cancer with lung and liver metastases She underwent PDT/SDT in January 2006. Her median survival time at that time was 6 months. She died in July 2006.
44	Male	29	October 2005 - metastatic colorectal cancer, with several liver metastases, his median survival time was 3 months. He had PDT/SDT in October 2005. This patient died in February 2006.
45	Male	65	This patient had metastatic colorectal cancer, with several liver metastases. He was also a Type 2 diabetic and hypertensive. Median survival time was 6 months. He had PDT/SDT in July 2006. This patient has been lost to follow up.
46	Female	48	This patient had metastatic colorectal cancer, with liver metastases. She had PDT/SDT in January 2007, at which time her median survival time was 3 months. This patient died in March 2008.
47	Female	54	October 2007- squamous cell carcinoma of the anus, following a previous history of anal fissures and this was treated with radiotherapy and chemotherapy in 2006. In the first instance this patient turned down surgery and a local resection was not possible. In October 2007 there was no local disease detectable. However, she had a liver metastasis diagnosed in April 2007.

			She was listed for a partial hepatectomy. She decided to do neo-adjuvant PDT/SDT before surgery, which she had in October 2007. She had a partial hepatectomy in February 2008 and on histology the metastatic lesion was found to be necrotic with no active tumour present. She was last seen in mid January and she is fit and well and cancer free.
48	Male	56	This man had metastatic colorectal cancer with many peritoneal metastases. He underwent PDT/SDT in November 2007. He coped with this well, apart from some discomfort in the abdominal muscles post-PDT/SDT, due to an inflammatory response to tumour cell necrosis from the peritoneal secondaries. His median survival time was 3 months. This patient died at the end of May 2008.
49	Female	48	November 2007 - metastatic colorectal cancer with metastases in the liver and the left lung. Her median survival time was 6 months. She had PDT/SDT in April 2008. At the time of starting PDT/SDT her median survival time was 2 months. This patient died in mid October 2008.
50	Male	74	September 2006 - carcinoma of the rectum, for which he had refused an abdominal perineal resection. Without a perineal resection his median survival time was 12 months. He had two rounds of PDT/SDT, one in September 2006 and the other in August 2007. Last contact with him was in December 2008, at which time he was alive and well, but still had tumour in the rectum. Since that time he has been lost to follow up.
51	Female	70	October 2008 - metastatic colorectal cancer, with metastases in the left lung and liver. She had been offered Irinotecan but turned this down. She had PDT/SDT in October 2008, at which time her median survival time was 3 months. She was last seen in January 2009, at which time she had a good quality of life, but was not tumour free.
52	Male	64	This patient had colorectal cancer with a large mass in the pelvis and several lung metastases. He underwent PDT/SDT in January 2009. The mass in the pelvis had been obstructing the right ureter; the right ureter was stented. He was covered with Dexamethasone 2 milligrams twice daily. Ten days after treatment his right leg developed a mild oedema and this gradually settled over the following week. Previous to treatment he had had significant back pain due to the pelvic mass and this began to clear up some 10 days following PDT/SDT. He is currently considering another course of PDT/SDT.

### **GRANULOSA CELL TUMOUR**

53	Female	63	August 2005 - recurrent Granulosa Cell Tumour with secondaries around the portahepatis. She had been turned down for radio frequency ablation and wished to try PDT/SDT. She had
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			this in August 2005. At that time her median survival time was one year. At the time of writing she is alive and well and relatively symptom free, but not tumour free.
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### **LYMPHOMA**

54	Female	60	This patient had recurrent Non-Hodgkins Lymphoma, which was resistant to second-line chemotherapy. She had PDT/SDT in July 2005. At the time of writing she is in full remission and has no recurrence of tumour.
55	Male	69	This patient had chemo-resistant recurrent Hodgkins Lymphoma. He underwent PDT/SDT in September 2005, when his median survival time was 3 months. He died in December 2005.
56	Female	55	This patient had recurrent Non-Hodgkins Lymphoma, with a large gland on the left side of the neck. She had PDT/SDT in May 2006. Following her up in July 2006, the mass was a quarter of its original size and two other tumours in local lymph glands had disappeared. Since that time this patient has been lost to follow up.
57	Female	59	This patient had chemo-resistant recurrent Non-Hodgkins Lymphoma. At the time of seeing her her median survival time was 3 months. She underwent PDT/SDT in June 2007. There was a significant reduction in tumour size a month after the PDT/SDT treatment. This patient died in January 2008.
58	Male	64	This patient had chemo-resistant recurrent Non-Hodgkins Lymphoma, with extensive involvement in the abdomen. He had PDT/SDT in February 2008, when his median survival time was 3 months. He died at the end of July 2008.
60	Female	55	This patient had recurrent Non-Hodgkins Lymphoma. She underwent PDT/SDT in August 2008. Post-PDT/SDT the enlarged lymph nodes had decreased in size by 40%. This patient is still alive and well and is considering further PDT/SDT.

### **HEAD & NECK CANCERS**

61	Male	58	This patient had metastatic squamous cell carcinoma of the base of the tongue, with metastases in the right lung. His median survival time was one year. He underwent PDT/SDT
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			in April 2006. This patient has been lost to follow up.
62	Male	60	October 2008 - recurrent squamous cell carcinoma of the mouth. He had had surgery for his tumour, but has not had a complete clearance. He had been offered a further radical neck resection, with 25% chance of full clearance, but because of the mutilating nature of the operation he was not happy to go down the surgical route. He had also been offered chemotherapy, but had been informed that chemotherapy is generally ineffective in head and neck cancer. He had PDT/SDT in October 2008. He refused Dexamethasone to cover this procedure and a week after finishing PDT/SDT he developed significant swelling due to an inflammatory response to tumour cell necrosis in the area of the throat and cheek, for which he then accepted Dexamethasone. However, the swelling continued and he developed problems in swallowing. He had to have a gastrostomy with an indwelling PEG tube. At the time of writing his condition is now settling and the swelling is beginning to resolve. In this case he clearly had a big response to tumour cell necrosis and the spread of the tumour was far wider than would have been covered by a radical neck resection and therefore in hindsight surgery would not have worked in clearing his residual tumour.
63	Female	58	October 2006 - squamous cell carcinoma of the larynx, following radiotherapy 20 years earlier for Hodgkins Lymphoma. She had been offered a laryngectomy for her squamous cell carcinoma of the larynx, with routine radiotherapy offered post-laryngectomy to reduce the risk of local recurrence. As she had had previous radiotherapy, the risks of further radiotherapy were magnified, so she decided to turn this down. Instead she did neo-adjuvant pre and post operative PDT/SDT and she got no local recurrence. However, she developed a distant recurrence under the base of the skull on the left side on November 2008 and at that time her median survival time was 2 months. She underwent PDT/SDT under Dexamethasone cover in November 2008. Following this she developed a trigeminal neuralgia due to scarring following an inflammatory response to tumour cell necrosis of her recurrent cancer. This was dealt with with analgesics. At the time of writing she is deteriorating and is unlikely to survive beyond the end of March 2008.
64	Female	58	January 2009 - adenocarcinoma of the pallet, with a large tumour on the left hand side of the pallet, with a large lymph gland on the right side of the neck, sufficiently large to obstruct her turning her head, with several lymph glands on the left hand side of the neck. She had PDT/SDT in January 2009, under Dexamethasone cover. A week after PDT/SDT the neck glands had reduced in size by 50% and the tumour has now become operable, with less mutilating consequences than pre-PDT/SDT. If she is to go on and have operative intervention,

			this would be followed by post-operative PDT/SDT.
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### **KIDNEY CANCERS**

65	Male	56	February 2007 - he had had kidney cancer in the left kidney 10 years ago and on seeing him in February 2007 he had secondaries in the pancreas and both lungs. His median survival time when I saw him was one year. He had PDT/SDT in April 2007. A scan done in August 2007 showed tumour progression. He then went on to have a monoclonal antibody. He is still alive and has a good quality of life.
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### **NON-SMALL CELL LUNG CANCER**

66	Female	80	August 2005 - inoperable non-small cell lung cancer of the left lung. She had turned down palliative radiotherapy and at the time she was seen her median survival time was 6 months. She had PDT/SDT in September 2005. Following PDT/SDT she had some inter-scapula ache, but other than that she was well. She underwent a second course of PDT/SDT in June 2007 because up until March 2007, she had stable disease and she had tumour progression in June 2007. She did well on this course and at the time of writing she still has stable disease and is alive and well, with a good quality of life.
67	Female	37	This patient had metastatic non-small cell lung cancer with metastases in the opposite lung and also liver metastases. Her median survival time was 3 months. She had PDT/SDT in December 2005. This patient died at the end of March 2006.
68	Female	79	This patient had non-small cell lung cancer in the left upper lobe. Her median survival time was 6 months. She had PDT/SDT in June 2006. At the time of writing she is alive and well and has stable disease.
69	Female	61	This patient had non-small cell lung cancer. She underwent PDT/SDT in August 2006 under

			Dexamethasone cover. Her median survival time was 6 months. This patient died on 24 <sup>th</sup> October 2007.
70	Male	49	July 2006 - non-small cell lung cancer, at which time his median survival time was 6 months. He had PDT/SDT at that time. This patient died at the end of December 2006.
71	Female	56	July 2007 - non-small cell lung cancer of the left lung, with a metastasis in the right adrenal gland. At the time of seeing her she had a troublesome persistent cough, which she had had for 10 months. Her median survival time was 6 months. She underwent PDT/SDT in July 2007 and one month after treatment her cough cleared up. Also the airflow into her left lung improved 60% one month following PDT/SDT. She had a further a course of PDT/SDT in October 2007 when she was becoming symptomatic again with breathlessness. She responded well to this until March 2008, when she developed a severe chest infection and pain in the right adrenal gland increased. She decided not to do any further PDT/SDT. At the time of writing she is alive, but has progressive disease.
72	Male	69	This patient had non-small cell lung cancer in the left lung, with a secondary in the right temporal lobe. He had radiotherapy to the brain secondary, but decided not accept chemotherapy for the lung primary. He had PDT/SDT using Dexamethasone cover and at the time of treatment in November 2007, his median survival time was 3 months. He did well following PDTSDT and with no further treatment he survived until the end of December 2008.
73	Female	79	This patient had non-small cell lung cancer in the right lung and metastases in the right and left gluteal muscles. Her median survival time was 3 months. She had PDT/SDT under Dexamethasone cover in April 2007 and her median survival time at the time of treating her was 3 months. She was last seen in mid July 2007 and at that time she was in reasonably good clinical condition, but still had disease. Since then she has been lost to follow up.

74	Male	67	This patient had non-small cell lung cancer in the right lower lobe. At the time his median survival time was 3 months. He had PDT/SDT in March 2008. A month post-PDT/SDT, his dry cough had improved, which was persistent before treatment, but he developed a left sided headache. At that time it was suspected he had developed a brain secondary, which on further investigation proved to be the case. He died in May 2008.
75	Female	70	This patient had non-small cell lung cancer in the left lung. She had chemotherapy in April 2008

			which had been ineffective. She underwent PDT/SDT in November 2008. Previous to treating her she had difficulty breathing deeply and was coughing. Three weeks post-PDT/SDT she could breath more deeply and was coughing less. When she was first seen her median survival time was 4 months. At the time of writing she is alive, but still has disease.
76	Male	62	This patient had non-small cell lung cancer, with metastases in the brain and in the right hip. He had PDT/SDT in October 2008, when his median survival time was 3 months. He died at the end of January 2009.
77	Female	53	March 2008 - non-small cell lung cancer of the right lung. Her median survival time was 3 months. She had PDT/SDT and she died at the beginning of August 2008.
78	Female	79	June 2007 - non-small cell lung cancer. She had a previous history of right upper and middle lobectomy for adenocarcinoma of the lung in 1999. In January 2007 she developed a non-small cell lung cancer from the stump on the right side and she had also developed several bony metastases in the thoracic spine. Her median survival time was 6 months. She had PDT/SDT in July 2007. The pain in the bone metastases disappeared a month following PDT/SDT and she continued with stable disease until July 2008, when she developed haemoptysis. She was put on Tarceva and had four doses of radiotherapy and decided on grounds of cost not to do more PDT/SDT. She was also diagnosed in September 2008 as having a secondary in the left adrenal gland. At the time of writing she has progressive disease and is reconsidering her options re: further PDT/SDT.

### **RELAPSED ACUTE MYELOID LEUKAEMIA**

79	Female	50	This patient had chemo-resistant acute myeloid leukaemia. Her Neutrophil and Lymphocyte count and platelets were persistently low. She wished to try PDT/SDT using ultrasound over femurs, pelvis and sternum, to try and have an effect on the bone marrow. This was administered in November 2008. At the beginning of January 2009 she had further blood tests,
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			but the platelets, Neutrophils, Lymphocytes remained low and the presumption is that the treatment has had no significant effect.
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### **MELANOMA**

80	Male	60	March 2006 - metastatic melanoma. He had been diagnosed in December 2005. He had one brain metastases. He had multiple skin metastases distributed all over the body. His median survival time was 3 months. He had PDT/SDT in March 2006. He died in May 2006.
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### **MESOTHELIOMA**

81	Male	71	This patient had a large right sided mesothelioma. At the time he had just finished chemotherapy (Alimta plus Cisplatin). The chemotherapy had been ineffective. His median survival time was 3 months. He had PDT/SDT in August 2007. He died in early December 2007.
82	Male	62	April 2008 - mesothelioma in the right lung. His median survival time was 6 months. He underwent PDT/SDT May 2008, under Dexamethasone cover. At the time of writing he was still alive, but has tumour progression with increased breathlessness and he has decided not to carry out any further treatment.
83	Male	67	July 2008 - mesothelioma in the right lung, with a median survival time of 6 months. He refused radiotherapy and chemotherapy and wished to try PDT/SDT. At the time of writing he is still alive and has had one dose of Alimta chemotherapy agent, at the recommendation of his Oncologist. He reacted badly to this and his condition deteriorated soon after the chemotherapy. At the time of writing he is in a hospice and is unlikely to survive beyond the end of February.

## **NEURO-ENDOCRINE TUMOURS**

84	Female	39	This patient had had a bronchial carcinoid removed from the right lung by lobectomy in 2000. She became pregnant in 2003 and at that time she was found to have several liver metastases from her previous carcinoid. She was put on Sandostatin injections, but this did not work. She had MIBG in November 2003, but she felt this made her worse and she developed radiation sickness. When seen in June 2005, she had been offered an experimental radioactively labelled drug which on the basis of her previous experience with MIBG, she decided not to take up. She had PDT/SDT in December 2005 and after the treatment course she felt significantly better. Her initial median survival time was 6 months. She died in April 2006.
85	Female	50	This patient had an extensive neuro-endocrine tumour, with many bone metastases in all the major bones. Because of the extensive nature of the disease and because of her clinical state, it was decided to limit PDT/SDT to one week of treatment, which was carried out in November 2006. Following this one week of treatment she developed increased pain in all her bone secondaries, which was managed with Dexamethasone. It was decided not to do another week of treatment. She has continued on conventional treatment. Her median survival time initially was one year. She is still alive with progressive disease at the time of writing.

## **OESOPHAGEAL CANCER**

86	Male	56	April 2006 - carcinoma of the oesophagus. He had PDT/SDT in April 2006 under Dexamethasone cover. His median survival time at that time was 3 months. He died in June 2006.
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87	Male	47	April 2006 - oesophageal cancer which was originally diagnosed in December 2004. He had had chemotherapy followed by surgery, but reacted very badly to the chemotherapy. In November 2005 he had lower back problems and a CT scan showed bony metastases. In January 2006 he had T11 vertebrae replaced, but post surgery got numbness in the right hand and the right leg. When seen he had several brain lesions and was on Dexamethasone and had had whole brain radiotherapy. His median survival time was 2 months. He underwent PDT/SDT under Dexamethasone cover in May 2006. He died in July 2006.
88	Male	64	September 2007 - oesophageal cancer. He had refused all conventional treatment approaches and wanted to do PDT/SDT, which was administered under Dexamethasone cover in November 2007. He had a stent in place. His median survival time at that time was 3 months. When seen again in December 2007 he was significantly better. His appetite was improved and his swallowing was significantly easier. At the time of writing the patient has been lost to further follow up.
89	Male	61	December 2007 - inoperable carcinoma of oesophagus with liver metastases. He was only able to swallow fluids at that time. In his previous history 20 years ago he had a hiatus hernia and had reflux oesophagitis for many years. He had PDT/SDT under Dexamethasone cover in January 2008. At that time his median survival time was 2 months. This patient died in April 2008.

### **OVARIAN CANCER**

90	Female	62	March 2005 - stage 1C ovarian cancer. She refused all conventional treatment approaches. Her median survival time was unknown, but the chances of a recurrence even with effective
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			treatment, were high. She underwent PDT/SDT in July 2005. At the time of writing she is still tumour free and has not had any further treatment approaches; i.e. no chemotherapy.
91	Female	62	August 2005 - recurrent ovarian cancer, with a median survival time of 3 months. She had PDT/SDT in August 2005. She died in June 2006.
92	Female	50	November 2005 - recurrent carcinoma of the ovary. Her median survival time was 3 months. She had PDT/SDT in December 2005. This patient died in March 2006.
93	Female	52	February 2006 - recurrent ovarian cancer. She refused chemotherapy and wanted to try PDT/SDT, which she did in February 2006. Her median survival at that time was 6 months. This patient has been lost to follow up.
94	Female	63	October 2006 - recurrent ovarian cancer. She had a large pelvic recurrence. She underwent PDT/SDT in October 2006. A week after PDT/SDT she lost a large piece of necrotic tumour through her vagina. She developed some discomfort in her abdomen post-PDT/SDT which was controlled using Dexamethasone. When first seen her median survival time was 3 months. A scan 3 months following PDT/SDT showed a reduction in pelvic mass. This patient died at the beginning of March 2007.
95	Female	43	This patient had recurrent ovarian cancer. She had PDT/SDT in May 2007. At that time her median survival time was 3 months. She died at the end of October 2007.

**PANCREATIC CANCER**

96	Male	70	April 2006 - recurrent carcinoma of the pancreas, with secondaries in the lungs and throat. His median survival time was 2 months. He had PDT/SDT under Dexamethasone cover in May 2006. He tolerated this well. He died at the end of July 2006.
97	Male	61	September 2007 - pancreatic cancer both in the head and the tail of the pancreas. His median survival time at the time of seeing was 2 months. He underwent PDT/SDT in December 2007. He died at the end of February 2008.
98	Female	77	This patient was found to have a carcinoma of the pancreas on routine body scan. She also had longstanding myelodysplasia. Surgery was suggested, but she turned this down. She

			wanted to try PDT/SDT, but she refused to have this covered with Dexamethasone. She had PDT/SDT in December 2007. One week after completion of PDT/SDT she collapsed with a left sided hemiparesis. A CT scan showed a cerebral infarct and it was concluded that the myelodysplasia made her more likely to develop a left hemiparesis. This patient's median survival time was 6 months when first seen. However, she died as a result of the hemiparesis at the end of December 2007.
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### **PERITONEAL CANCER**

99	Male	57	January 2006 - chemo-resistant peritoneal cancer. At the time of seeing him his median survival time was 3 months. He had PDT/SDT in January 2006. He died at the end of February 2006.
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### **PROSTATE CANCER**

100	Male	72	June 2005 - hormone resistant prostate cancer, with multiple bony metastases in the pelvis. At the time of seeing him his median survival time was 4 months. He had PDT/SDT in June 2005 and the pain in the bony metastases was initially aggravated, but then resolved 2 months later. This patient died early December 2005.
101	Male	71	September 2005 - recurrent prostate cancer, which had been diagnosed in January 2004 following a trans-urethral resection. He had a prostatectomy in February 2004 and one lymph node was involved. When he presented his PSA was doubling every 3 months. Casodex was recommended, which he went on to. His median survival time was at that time. He underwent PDT/SDT in October 2005. He continued to do well until September 2006 when his PSA went

			up again. It was recommended he undergo further PDT/SDT, but he was unable to make a decision on this at the time. He died from a stroke in September 2008.
102	Male	59	January 2006 -he had had a prostatectomy for a Gleason 7 prostate cancer in December 2005. When seen his PSA was less than 0.2. He was recommended radiotherapy post-surgery, but he decided to turn this down. In his family history his father had died of prostate cancer. He had PDT/SDT in January 2006. When seen again in November 2006 his PSA was still undetectable at that time. His PSA started to rise again in 2008 and he is having some local radiotherapy to deal with that.
103	Male	55	July 2006 - metastatic prostate cancer. He had several bony secondaries. He had PDT/SDT in August 2006. The pain in his bony secondaries increased some 3 weeks post-PDT/SDT and then it settled. Median survival time at the time of his first appointment was 6 months. This patient died in July 2008.
104	Male	66	September 2006 - recurrent prostate cancer and also recurrent pancreatic cancer. He underwent PDT/SDT in November 2006. His median survival time was 6 months. This patient died in August 2008.
105	Male	59	December 2008 - metastatic prostate cancer, with multiple bony metastases. His median survival time was one year. He had PDT/SDT in December 2006. Post PDT/SDT his PSA went up, which can happen in some cases as PSA is an intra-cellular protein, so therefore on tumour cell necrosis, due to the PDT/SDT, this can initially raise PSA levels. His PSA continued to remain up for 9 months. The pain in his bony metastases improved 2 months following the PDT/SDT. Currently he is alive, but has several more bony metastases, although remains pain free.
106	Male	66	July 2006 - prostate cancer in the left side of the prostate, with some extra capsular extension and some lymph gland involvement. He had two courses of PDT/SDT in August and December 2006. Currently he is well and his tumour is stable. There is no metastatic spread. His median survival was not possible to calculate when first seen.
107	Male	57	This patient had prostate cancer with lymphatic spread and liver metastases, but no bone metastases. His median survival time was 2 months. He had a one week course of PDT/SDT in January 2008; he was not well enough to consider doing a two week course. This patient died in March 2008.

## **SARCOMAS**

108	Female	42	September 2005 - leiomyosarcoma in December 2004. When she presented she had secondaries near to the heart, pancreas and several metastases in the lungs. At the first appointment she had a median survival time of 3 months. She underwent PDT/SDT in November 2005. This patient died at the end of March 2006.
109	Female	50	September 2008 - she had had a synovial sarcoma in the left leg, which was dealt with operatively and at presentation she had lung metastases and metastases in the pericardium. She had PDT/SDT, under Dexamethasone cover in November 2008. Her median survival time initially was 6 months. At the time of writing she is fit and well and no further scans have been done on her.
110	Female	34	This patient had a fibrosarcoma in the upper left chest, causing difficulty with abduction of the left shoulder. She had an excision of this tumour in 2004, but it had recurred. She had been offered a wide local excision followed by radiotherapy, but she did not wish to follow this treatment option. She had PDT/SDT in April 2006. This patient has been lost to follow-up.

## **SMALL CELL LUNG CANCER**

111	Female	61	This patient had a small cell lung cancer. She had chemotherapy and also had PDT/SDT in August 2005. Interestingly in this patient, 2-3 weeks after PDT she noticed her hair started to regrow and previous to that her hair had been falling out. Subsequent scans showed an 80% reduction in tumour size. This patient's median survival time was one year. This patient is still alive and well and tumour free.
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## **STOMACH CANCER**

112	Female	45	This patient presented with recurrent stomach cancer. She had a median survival time of 3 months. We carried out PDT/SDT on her in September 2005. She died in November 2005.
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### **URACHAL TUMOURS**

113	Female	39	November 2006 - recurrent urachal tumour. At that time she had a median survival time of 6 months. She had PDT/SDT in November 2006. This patient died in May 2008.
114	Male	63	March 2008 - recurrent urachal tumour which had been originally diagnosed in September 2007. He had a significant amount of tumour mass in his abdomen and his median survival time was 3 months. He had PDT/SDT in March 2008, under Dexamethasone cover. The tumour mass in the abdomen diminished significantly 2 months post-PDT/SDT. He had a nephrostomy and he was passing blood-stained urine through this, but this cleared up 3 months after the PDT/SDT. He also began to put weight back on following the PDT/SDT. This patient died in December 2008.

### **CARCINOMA OF UNKNOWN PRIMARY**

115	Female	40	January 2008 - carcinoma of unknown primary, presenting as a pelvic mass. She had had debulking surgery in May 2007. Her median survival time was impossible to predict. She had PDT/SDT on her in January 2008 and coped well with this. A scan at the end of May 2008 showed the tumour reduced in size and had taken on a nodular appearance. She had another scan in September 2008 which then showed tumour progression. She decided not to do further PDT/SDT.
116	Female	67	March 2008 - carcinoma of unknown primary, which was metastatic. She had multiple tumour deposits in a large number of abdominal lymph nodes. At the time of seeing her median survival time was 2 months. She had previously had Irinotecan as chemotherapy. She had PDT/SDT in April 2008. She died in June 2008.