Medicor Cancer Centre's Observational DCA Treatment Data

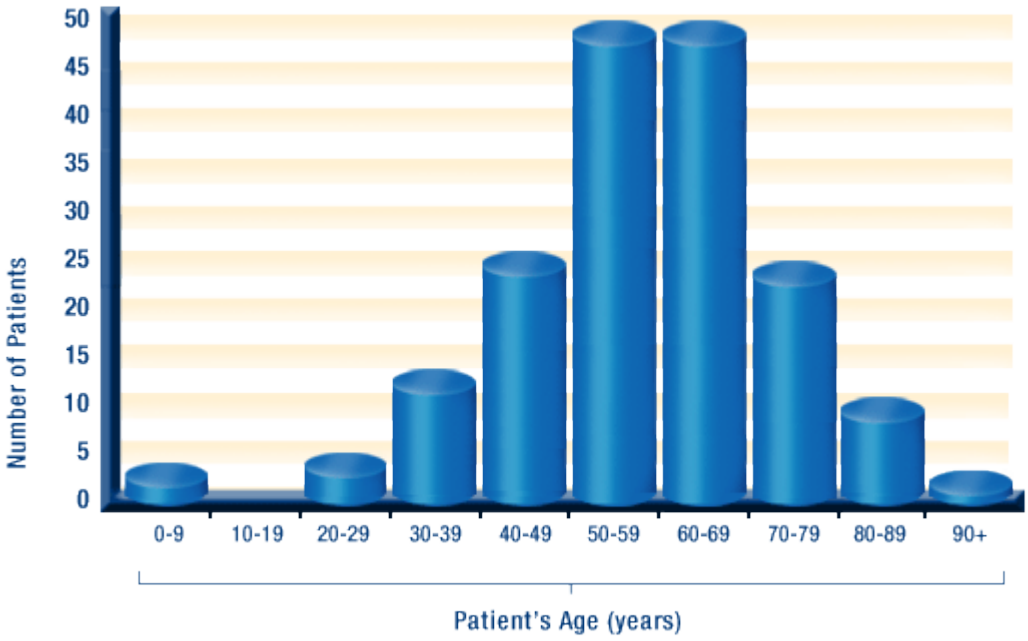
This is our second DCA data analysis update. This data is not from a clinical trial. It is based on a review of patients we have treated so far with DCA. Since our primary purpose is patient care and not data collection, this data may not meet the rigorous criteria employed in clinical trials. It may not be generalizable and should be interpreted with caution. We are sharing this data to help further patient care and knowledge.

Patient Demographics

At **Medicor Cancer Centres**, we have so far treated 180 cancer patients with DCA. Most of these patients have exhausted all conventional cancer treatments. The proportion of males and females treated was 52% males to 48% females.

Patients have ranged in age from 2 years to 90 years. The majority of our patients (56%) fall in the age group of 50-69 years.

Age Distribution of Patients Treated with DCA



The site of the primary cancer in these patients is presented in the following table:

Site of Primary Cancer in Patients Treated with DCA

Site of Cancer	Number of Patients Treated	% of Patients Treated
Lung	40	22%
Brain	26	14%
Colon	25	14%
Breast	15	8%
Ovary	8	4%
Pancreas	8	4%
Stomach	6	3%
Skin	5	3%
Prostate	4	2%
Bladder, Cervix	3 (each)	2% (each)
Gall Bladder, Kidney	3 (each)	2% (each)
Lymphatics	3	2%
Lymphoma	2	2%
Oropharynx, Pleura	2 (each)	2% (each)
Adenoid, Appendix	1 (each)	1% (each)
Bile Duct	1	1%
Carcinosarcoma	1	1%
Endometrium	1	1%
Esophagus, Hard Palate	1 (each)	1% (each)
Leiomyosarcoma	1	1%
Pelvis, Spine, Thyroid	1 (each)	1% (each)
Unknown	11	6%

Patient Responses

We have treated patients with a dose of DCA ranging between 15mg/kg/day and 75mg/kg/day. On average, most patients receive a dose of approximately 25mg/kg/day. We are presently treating patients with a cyclic regimen of 1-3 weeks on followed by 1 week off. This regimen is adjusted to suit each individual patient by our physicians.

All of our patients understand that there is no guarantee that DCA will work for their cancer or what the long term effects of DCA may be.

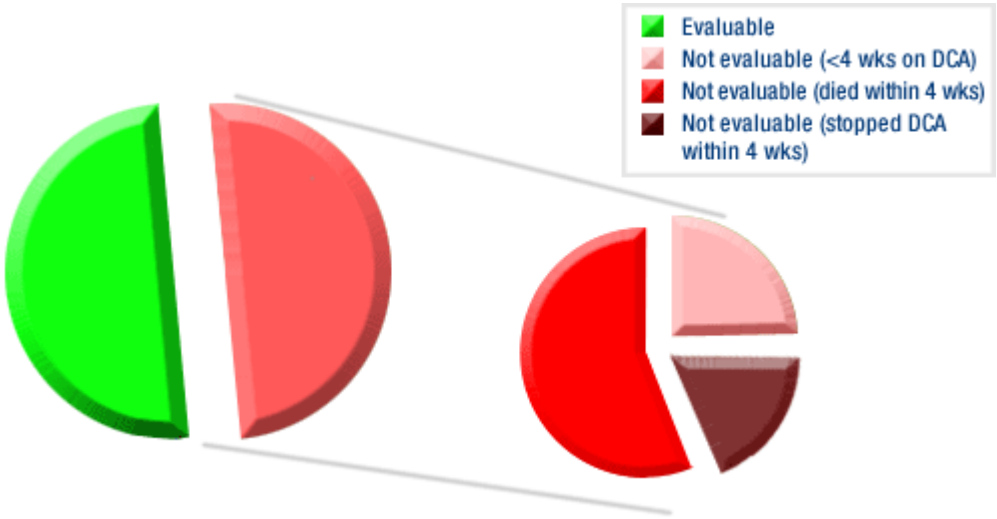
Patient responses presented here are based on evaluation after a minimum of 4 weeks from start of treatment.

Based on this criterion, out of the total of 180 patients treated, we have been able to evaluate 90 patients (50%) as of March 20, 2008. The other 90 patients were not evaluated for the following reasons:

- 52 patients (58%) died within 4 weeks of starting DCA due to unrelated reasons (we do not deny patients access to safe treatment based on the stage of illness, and some of our patients are very advanced stage).
- 22 patients (24%) have recently started DCA treatment (< 4 weeks) – their data will be available soon.
- 16 patients (18%) stopped DCA after < 4 weeks for various reasons. Three patients started

other treatments, 2 had other medical reasons (like admission to hospital), 2 had side effects (confusion), 1 had non-medical reasons, and 8 were lost to follow up.

Patient Evaluation Status 4 Weeks after start of DCA Treatment



Responses in Patients After at Least Four Weeks of DCA Treatment

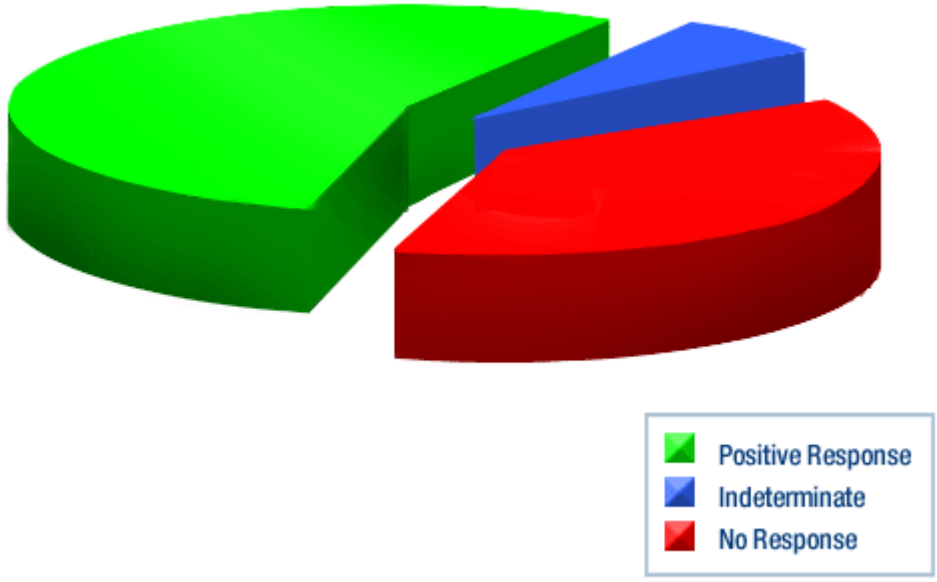
The following data is based on the 90 patients that were evaluated after at least 4 weeks from start of DCA treatment.

The response to DCA treatment in these 90 patients is presented below.

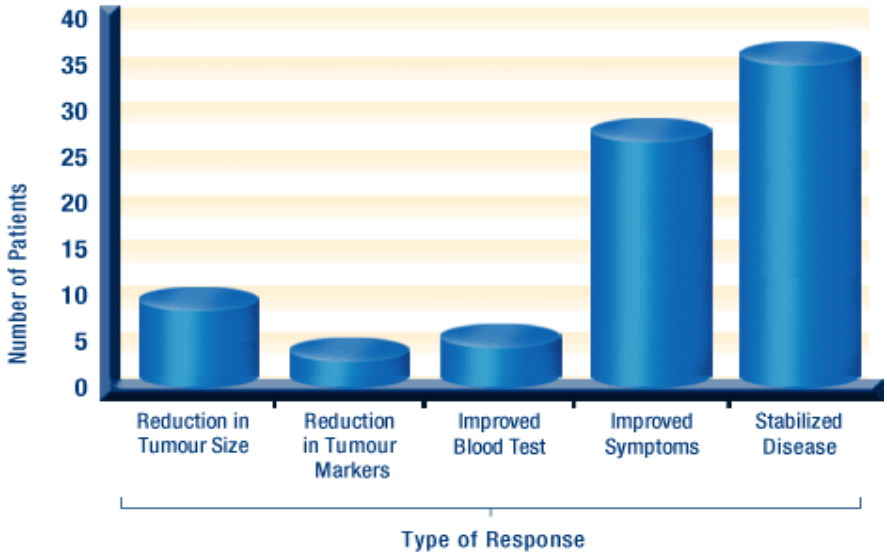
- 54 patients (60%) showed a positive response to DCA. We have divided the positive responses into the following five categories based on the degree of clinical benefit. The categories below are not mutually exclusive since patients may have had a combination of positive responses while on DCA. For example a patient who had a reduction in tumour size and symptomatic improvement is counted in both category 1 and 4. For this reason, the numbers below do not add up to 54.
    - **Category 1**: Reduction in tumour size. Seen in 10 patients (11%). These patients had measurable tumour reduction which was demonstrated by imaging studies and/or direct tumour measurement.
- **Category 2**: Reduction in tumour markers. Seen in 5 patients (5.5%). These patients had a reduction in markers for colon cancer (CEA), ovarian cancer (CA-125) or prostate cancer (PSA).
- **Category 3**: Improvement in blood tests. Seen in 7 patients (8%). These included improvements in hemoglobin, liver enzymes, albumin, and other tests indicating reduced tissue damage or reduced cancer activity.
- **Category 4**: Symptomatic improvement. Reported in 28 patients (31%). This included significant pain reduction, relief of bowel obstruction, weight gain, improved appetite and improved energy level. These improvements were sustained for a period of more than 4 weeks, thus making it unlikely to be placebo effect.
- **Category 5**: Disease stabilization. Seen in 36 patients (40%). In these patients, there was no evidence of cancer progression while taking DCA.
- In 9 patients (10%), there was no way to determine if the cancer responded or progressed. These patients had no readily measurable tumour, no relevant tumour markers, and blood tests with no major abnormalities.
- In 27 patients (30%), there was no response to DCA treatment. In these patients, the cancer

progressed despite DCA treatment, including increased doses.

Patient Responses to DCA Treatment



Type of Positive Response to DCA Treatment



Site Specific DCA Response Rates

The site of primary cancer in the 90 patients who were evaluable after at least 4 weeks from start of DCA treatment is as follows:

Site of Primary Cancer	Number of Patients	Percentage of Patients
Lung	22	24%
Brain	16	18%
Colon	11	12%
Breast	7	8%
Ovary	6	7%
Skin	3	3%
Lymphatics	3	2%
Lymphoma	2	2%
Bladder, Cervix, Kidney	2 (each)	2% (each)
Prostate, Pleura	2 (each)	2% (each)
Adenoid, Esophagus	1 (each)	1% (each)
Gallbladder, Hard Palette	1 (each)	1% (each)
Pancreas, Pelvis	1 (each)	1% (each)
Spine, Stomach	1 (each)	1% (each)
Unknown	4	4%

Lung Cancer: The 22 lung cancer patients are subdivided into non-small cell (19) and small cell carcinomas (3).

Since the number of small cell carcinoma patients is too small for meaningful interpretation, we are not reporting the findings.

Out of the 19 non-small cell carcinoma patients, 10 (52%) showed a positive response, 3 (16%) were indeterminate and 6 (32%) had no response to DCA treatment.

Brain Cancer: These were subdivided into gliomas (15) and other cancers (1).

Out of the 15 patients with gliomas, 11 (73%) showed a positive response, 2 (13%) were indeterminate, and 2 (13%) had no response to DCA treatment.

Colon Cancer: Out of the 11 patients treated, 8 (73%) had a positive response while 3 (27%) did not respond to DCA treatment.

Breast and Ovarian Cancers: The numbers for both these sites are too small to be meaningful and should be interpreted with caution. Overall the positive response rates were 71% and 67% for breast and ovarian cancers respectively.

Other Cancers: The numbers treated are too small to draw meaningful conclusions. However, we are observing similar positive responses

Duration of treatment

Out of the 90 patients who could be evaluated, the duration of DCA treatment has ranged from 4 to 30 weeks.

Duration of DCA Treatment in Patients Who Were Evaluated After at Least 4 Weeks

Duration in Weeks	No. of Patients	Percent
Up to 6 weeks	34	38%
7-12 weeks	41	46%
13-24 weeks	11	12%
25+ weeks	4	4%
Total	90	100%

Currently, 68 (76%) patients have stopped treatment with DCA while 22 (24%) are continuing treatment. The reasons for stopping treatment in the 68 patients are presented below.

Reasons for Stopping DCA Treatment

Reason	No. of Patients	Percent
Not effective	21	31%
Patient died	15	22%
Lost to follow-up	10	15%
Started other treatment	8	12%
Side effects	7	10%
Other non-medical reasons	7	10%
Total	68	100%

Side Effects

In our experience, DCA is a relatively safe cancer treatment. We have found that use of supplements appears to be helpful in reducing many side effects. We still don't know enough about the long-term effect of DCA in cancer treatment.

Out of the 90 patients who were evaluable for response, the frequency of reported side effects is as follows:

Side Effect	Frequency	Percent
None	45	50%
Fatigue	17	19%
Numbness	13	14%
Confusion	11	12%
Tremor	8	9%
Sedation	3	3%
Hallucinations	3	3%
Leg Weakness	1	1%
Heartburn	1	1%

Comments/ Our Opinions

Treating 180 cancer patients with DCA over a period of 1 year has given us the most comprehensive experience in the world to date. Based on this experience, we would like to share our following opinions with cancer patients.

We believe that DCA is a useful and relatively safe medical treatment for cancer patients who have exhausted scientifically proven treatment options.

DCA appears to be effective against many different cancers, not only lung, breast and brain.

We continue to see an overall positive response rate of between 50 and 75% in various types of cancer.

While DCA is not toxic to the body like chemotherapy, it is a potent drug with specific side effects and must be used under medical supervision.

Response to DCA is very individual as with other cancer treatments like chemotherapy. Based on clinical judgment, it is difficult to predict which patients are more likely to respond to DCA. Chemosensitivity tests like **ChemoFit™** may help predict response to DCA by itself and in combination with chemotherapy. DNA profiling "chemosensitivity" tests do not currently predict response to DCA or DCA+chemo.

We generally do not recommend DCA in combination with chemotherapy, unless a ChemoFit™ test can be performed first or the current chemotherapy is showing signs of failing.

DCA appears to be more effective in healthier cancer patients as opposed to patients with very advanced disease. For "end-stage" patients, DCA may not have enough time to work. (Despite this finding, we are seeing significant quality of life improvements regardless of how advanced the cancer is.) We are advising patients for whom no further conventional treatment is being offered: if you are considering DCA therapy, contact a physician without delay to be evaluated for DCA treatment.

The duration of DCA therapy is dependent on the individual, and may also depend on age. It appears that cyclic therapy with dose adjustment based on underlying conditions and side effects can continue for many months (over 6 months in some cases).

We have treated a breast cancer patient with DCA for several months (with tumour reduction on CT scans), but tumour re-growth then occurred. We believe this to be the first documented case of DCA resistance.

DCA dosing in adults must be chosen carefully, since doses above 25mg/kg/day are more likely to cause side effects. This is significantly different from the “lactic acidosis” research in children in which DCA could be given for months or years at 50mg/kg/day with minimal side effects.

Children with cancer who have exhausted all conventional treatments may benefit more than adults. This is based on our observation that many different tumour types respond to DCA, and that children can tolerate high dose DCA while adults generally cannot. We hope pediatric oncologists will consider trying DCA in such cases, and we are willing to co-manage or provide assistance.

These statements are our opinions only. They are based on existing research and our experience with DCA in cancer.

For questions or comments regarding this page please email to: **hkhan@medicorcancer.com**.

For detailed informations see: **http://www.medicorcancer.com/DCAtherapyData.html** or **http://www.thedcasite.com**

For direct treatments in Romania please ask: **alexander.huzau@gmx.de**