



The Kees Protocol

6-10-10

Indication: Advanced Prostate Cancer

Background: The Jubilee Clinic at the Sahlgrenska University Hospital in Gothenburg, Sweden has invented the KEES protocol. The hypothesis is that the treatment will stop formation of blood vessels within the tumor (angiogenesis inhibition). The name KEES comes from Ketoconazole-Etoposide-Estramustine and Sendoxan(Cyclophosphamide).

The original schedule consists of two main cycles:

Cycle A - Treatment with

Sendoxan (cyclophosphamide) 50 mg/day

Nizoral (Ketoconazole) 200 mg x 3

Prednisone 10 mg/day

in week 1,3 and 5

B – Treatment with

Vepesid (Etoposide) 50 mg x 2/day

Estracyt (Estramustine) 140 mg x 2/day

Prednisone 10 mg

in week 2,4 and 6

After 6 weeks of treatment there will be a break for two weeks, where after the treatment starts again from week 1. Many patients at the Sahlgrenska hospital were treated for more than six months, and 65% of the patients had a beneficial effect on their general well being and a PSA decline of > 80 %. A few patients had their PSA reduced to 0. The side effects were generally mild and well tolerated.

You can find an article about the treatment here:

http://www.fou.nu/info/dir/ansokan/34651/KEES_081001.doc

At Humlegaarden we individualize the treatment, so it will be tailor made for each individual patient. For example, we sometimes give a slightly lower dose and skip the breaks between the treatment cycles and skip one or two of the medications for patients with less severe disease or a sensitive general condition.

The treatment can continue for years if necessary. We also often combine the KEES protocol with other treatments like mistletoe treatment and 5- alpha reductase inhibitors (Proscar, Avodart)

By February 2010

- 37 patients with prostate cancer had received metronomic low dose chemotherapy from 2007 and onwards.
- 36 were evaluable, (one did not report back results after coming home).
- 29 got treatment with Ketoconazole, Etoposide, Estracyt Sendoxan og Prednisone in individually adjusted dosages.
- 3 patients had KEES without Etoposide

- 4 patients had only Ketoconazole + Sendoxan
- 1 patient had only Sendoxan 50 mg
- 29 out of 36 patients(80,6%) had a PSA reduction.
- 21 patients (58,3%) had a PSA reduction > 50%, 3 of these will probably become 50% responders because of short observation time..
- 11 patients (30,6%) had a PSA reduction >80%
- 7 patients(19,4 %) go a PSA raise.
- Mean PSA reduction = 63,1%
- 31 out of 37 patients(83,8 %) had bone metastases
- Only one patient had not received prior hormone therapy. He had the greatest PSA decline, from 598 23/12 2008 to 0,1 den 28.5.2009(99,9%) together with a complete remission of enlarged lymph nodes.

	PSA>-50%	PSA<-50%	PSA+
Total = 36	21 (58,3%)	8 (22,2%)	7 (19,4%)
full KEES = 28 (77,8%)	15 (53,6%)	7 (25,0%)	6 (21,4%)
KES (-etoposid) = 2 (5,9%)	1 (50%)	0	1 (50%)
KS (KES-estracyt)=5 (14,7%)	3 (60%)	0	2 (40%)
S (Only Sendoxan)=1 (2,9%)	0	1 (100%)	0
Previous Taxotere = 6 (17,6%)	2 (33%)	1 (17%)	3 (50%)
With bone metast. = 30 (86,1%)	17 (56,7%)	7 (23,3%)	6 (20.0%)
Without hormone treatment = 1 (2,9%)	1 (100%)	0	0