



Summer 2008

THE CHR VOICE

CLINICAL CARE • RESEARCH • EDUCATION

27 Years Leading in Infertility Care



CHR Staff Welcomes Kutluk Oktay, M.D. Will Lead New Institute for Fertility Preservation

The Center for Human Reproduction started the new year with exciting news, welcoming an accomplished new member to the CHR team, and announcing the founding of an important new division that adds vital and specialized resources to benefit CHR's patients.

Kutluk Oktay, M.D. joined CHR where he will serve as Medical Director for the newly-established *Institute for Fertility Preservation (IFP)*. Dr. Oktay is a pioneer in fertility preservation, and one of the best fertility doctors in the City (in the words of *New York Magazine*), as well as one of the most highly respected reproductive endocrinologists and infertility specialists.

For many years, Dr. Oktay practiced at Cornell and now has moved a few blocks west on 69th Street to bring his experience and energy to CHR.

IFP is barely underway and already has exciting developments to report: Thanks to Dr. Oktay's efforts, *IFP* has forged a unique affiliate relationship

with *Memorial Sloan-Kettering Hospital*, the premier academic cancer center in NYC, if not the nation. As part of this agreement, the hospital will hire a full-time physician assistant to exclusively coordinate fertility preservation efforts at *IFP* for their young cancer patients.

CHR has long offered patients a variety of fertility options, and *IFP* represents a significant new extension of those services. Fertility preservation is an innovative science of critical importance to cancer patients who face lifesaving cancer treatments, that may forever damage their reproductive capacities. *IFP* will offer innovative and sometimes experimental procedures to help such patients, and, if at all possible, safeguard their fertility options before chemo or radiation treatments can steal them away.

As a result of this unique focus, CHR's *IFP*, is a special place, which on short notice can accommodate a cancer patient's urgent needs, even if that means

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INTRODUCING . . .

Kutluk Oktay, M.D., F.A.C.O.G. is one of the world's foremost experts in fertility preservation. He joins CHR as Medical Director of the new division called the *Institute for Fertility Preservation (IFP)*, and will also serve as *Professor and Director of the Division for Reproductive Endocrinology and Infertility at New York Medical College*.

Dr. Oktay developed and performed the world's first ovarian



transplantation procedures as well as pioneered new ovarian stimulation protocols for embryo and oocyte freezing from breast and endometrial cancer patients. He has published extensively in top medical journals, such as *The New England Journal of Medicine*, *Lancet*, *JAMA* and *Journal of Clinical Oncology*. He frequently lectures around the globe and has received top scientific awards throughout the U.S. Dr. Oktay's research has made news in over sixty countries.



Dr. Oktay Earns "President's Award"

Congratulations to *Kutluk Oktay, M.D.*, Medical Director of CHR's *Institute for Fertility Preservation*, who together with his post doc, *Ozgur Oktem, MD*, was awarded the prestigious President's Award of the Society for Gynecological Investigation for the research paper "*FSH regulates Granulosa cell mitosis through jun amino terminal kinase*," which was presented at the annual meeting of the Society in San Diego, March 26-29, 2008.

EARLY DIAGNOSIS OF PREMATURE OVARIAN AGING TESTING FOR TWO PRINCIPAL RISK FACTORS

The CHR team reported in a published paper in 2007 (*Barad et al., Obstet Gynecol 2007;109:1404-10*) that at CHR approximately 50% of younger women (under age 41) suffer from premature ovarian aging (POA).

Even though this suggests that POA is a very frequent finding in fertility centers, the diagnosis is unfortunately often overlooked. Especially if POA is not very advanced, the premature aging process is often misdiagnosed as so-called unexplained infertility.

Once women are under fertility treatment, they quite obviously already have a recognized problem. Wouldn't it be nice if we could predict which young women will develop POA and, therefore, be at risk for infertility?

Researchers at CHR, under the leadership of CHR's **Medical Director, Norbert Gleicher, M.D.**,

feel that they have made considerable strides in reaching the goal of early diagnosis of POA risk. Two papers will soon appear, first in electronic format and later in print (in *Fertility and Sterility*, the official journal of ASRM), which will report that POA has two principal risk factors: one *genetic* and a second one that is *autoimmune*.

The two papers in press are pilot studies on a relatively small number of patients. The study has since been expanded to a much larger number of infertility patients and the results of the original pilot study were confirmed. Two follow-up papers, describing findings in this larger patient

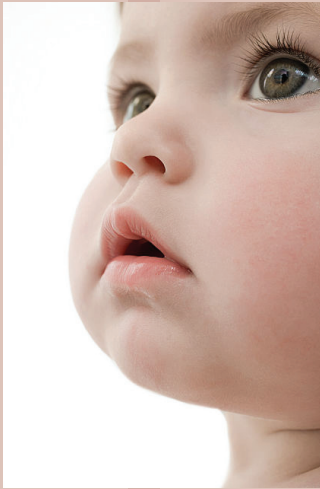
group, are currently submitted and under review.

The relevance of all of this to fertility preservation is that we now have come to believe that by testing young women for the genetic

and autoimmune POA risks, we can very early identify those at risk. These individuals' ovarian functions can then, even at young ages, be carefully evaluated longitudinally. Once demonstrated to deviate from normal ovarian aging curves, patients then can be advised accordingly. In such a way POA can be diagnosed early, and hopefully before these women are identified as infertile.

Early diagnosis, in turn, will allow early pregnancy planning or, alternatively, the consideration of fertility preservation technologies, such as egg and embryo freezing. One can perceive of even insurance companies covering fertility preservation in such cases, since such early intervention may be much more cost effective than later fertility treatments.

This additional scenario, thus, offers a third possible indication for fertility preservation after *elective* and *medically indicated* circumstances, discussed under the preceding heading. We call it the *premature ovarian aging indication* of fertility preservation.



IVF and Multiple Births

The **New York TIMES** published a story that examined the increase in multiple births as a result of IVF. **Norbert Gleicher, M.D.**, Medical Director of CHR, was consulted by the writer. Dr. Gleicher commented, "Yes, twin delivery has more risk than singleton delivery, but with good obstetrical care and educated patients, the risk of twin delivery is minimally higher."

"Lowering the Odds of Multiple Births"
- NY TIMES, 2/19/08

CHR in the News...

Acupuncture Connection?

The **Chicago Tribune** reported that some fertility centers are theorizing that acupuncture may make a positive contribution to successful IVF treatments. However other noted experts - including CHR's Medical Director **Norbert Gleicher, M.D.** - say the evidence simply isn't there yet. Dr. Gleicher said that CHR's fertility centers will occasionally arrange acupuncture for patients when they indicate they want it. However, he pointed out, any demonstrated benefit from acupuncture has yet to be reflected in the data.

"Acupuncture Might Help with Fertility"
- CHICAGO TRIBUNE, 2/08/98

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cryopreserving ovarian tissue on 24 hours notice, just hours before a newly-diagnosed patient is scheduled for chemotherapy; Or starting an unscheduled ovarian stimulation cycle for egg freezing purposes with a stimulation protocol, which doesn't excessively increase estrogen levels in a patient with an estrogen sensitive tumor because she is approaching a similar treatment deadline.

Under Dr. Oktay's guidance, *IFP* has very quickly become New York's dominant center for *medically required* fertility preservation, and we are excited to bring this new service to our patients.



New Findings: DHEA Also Reduces Miscarriage Rates: Especially in Older Women

As reported in previous issues, CHR continues to accumulate data on our DHEA experience. *Toronto West Fertility Associates*, in Toronto, Canada, is a facility also doing the same. Anecdotally, we'd heard they had similar results to ours, and last December they were kind enough to send us their complete data bank on DHEA usage at their center.

Their pregnancy experience results were, indeed, similar to our own, and we were especially interested in their **miscarriage rates**. As we have repeatedly noted in our UPDATES, we have come to believe that DHEA supplementation may reduce the number of chromosomally abnormal embryos (aneuploidy). We reached this conclusion after making two observations:

(1) In a small number of women who underwent PGD after being treated with DHEA, we found lower aneuploidy rates than in women without DHEA supplementation. Unfortunately, women in need of DHEA usually have small embryo numbers and, therefore, only rarely qualify for PGD. This kind of data accumulation is, therefore, very slow and so far we have not reached statistically robust enough numbers.

2) Our second, related observation was that we noted a surprisingly low miscarriage rate in DHEA pregnancies. Since miscarriages, especially in older women, are mostly due to chromosomal abnormalities, this observation, too, suggested the possibility that DHEA may reduce aneuploidy rates. To reach statistically robust conclusions, once again relatively large (pregnancy) numbers were required and we, therefore, up to this point, have been cautious to not over interpret our own data

This is why the timing of the arrival of the Toronto data was so exciting; these data not only confirmed the high pregnancy rate in very unfavorable patients with diminished ovarian reserve, but demonstrated an identical reduction in miscarriage rate to the one observed by us (when compared to national IVF data). Since the combined data sets between CHR and the Toronto

center involve an adequate size patient sample, we are now confident to state that **DHEA supplementation significantly decreases the miscarriage rate in women with diminished ovarian reserve.**

Indeed, we even can go beyond this statement: While a reduction in miscarriage rates is seen in women of all ages, the reduction is smaller in women below age 35 than in women above age 35 years, where the reduction often exceeds 50 percent. This, of course, should not surprise since miscarriages are known to increase with advancing female age. Most of these miscarriages are, however, due to aneuploidy and this observation brings us back to where we started from: Our new data, on the decrease in miscarriage rates after DHEA supplementation, especially in older women above age 35, strongly support that **DHEA, indeed, reduces chromosomal abnormalities (aneuploidy rates) in embryos.**

The importance of this observation cannot be overemphasized. Since older women represent in the USA the most rapidly growing age group of women having babies, our findings may have significance far beyond those older women who require fertility treatment. Indeed, if confirmed by further studies, DHEA may become a supplement to be given, like prenatal vitamins, to all (older) women contemplating pregnancy.

We, of course, have submitted an abstract on this exciting data to *ESHRE* and a full length manuscript is in preparation.

PARTICIPANTS WANTED

We are getting ready to launch the prospectively randomized DHEA study in younger women (under age 38) with so-called unexplained infertility, which we previously announced for early 2008. If you are interested in participating and/or are a physician who wants to have one of your patients considered for this (free of charge) study, please e-mail ascarpinato@thechr.com.



The Center for Human Reproduction

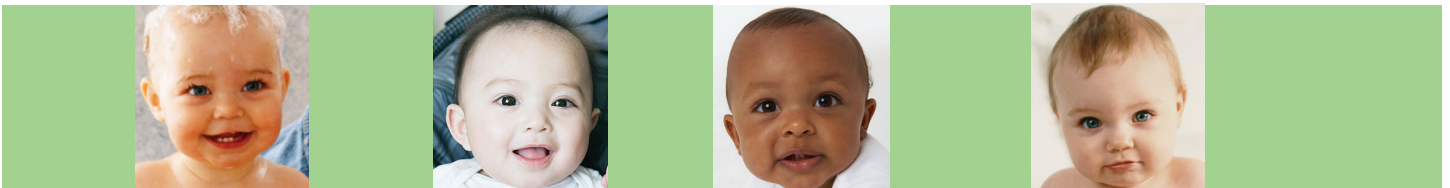
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27 YEARS LEADING INFERTILITY CARE

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We're on the Web!

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PATIENT TESTIMONIAL

Dear CHR,

I had just turned 40 and finished two failed IVF cycles when I found your website and your research on DHEA. I showed it to my clinician and he agreed to help me give it a try. Now age 41, I am pleased to report I have a positive pregnancy. I know there's still a long way to go before we realize our dream to take home a beautiful baby, but just the same we are very excited and attribute this success to DHEA and the support of the CHR website.

Thank you for your work and for giving us hope.

-Nancy
New South Wales, Australia

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