



# Recombinant FSH Alone vs. Combination FSH/LH Stimulation: A Prospective Trial



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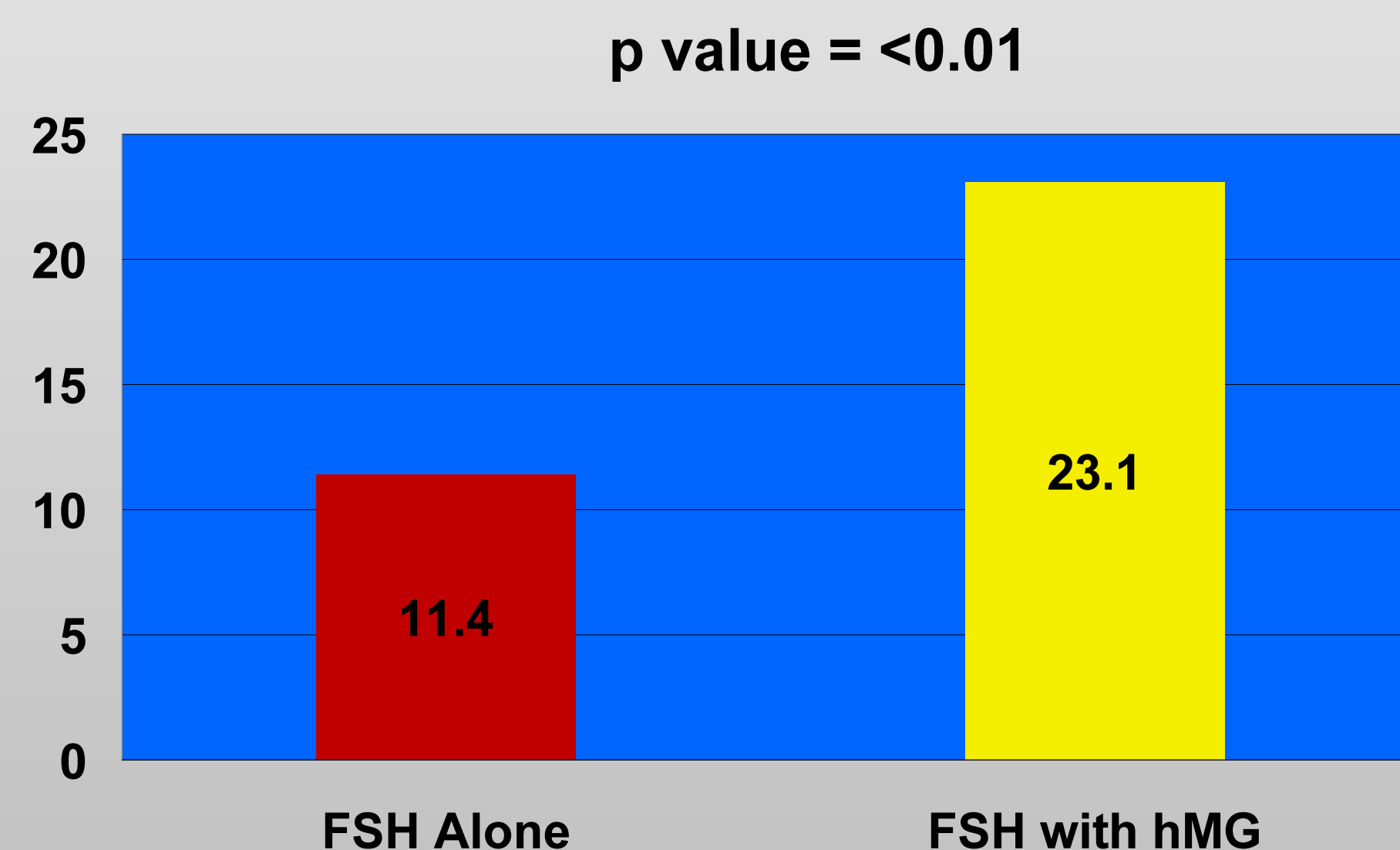
## Objective

Despite an abundance of clinical trials over the past several years, significant controversy persists regarding the optimal stimulation protocol for normal responders undergoing in vitro fertilization. This study was designed to compare the outcomes achieved with the use of recombinant FSH alone to the use recombinant FSH plus urinary hMG.

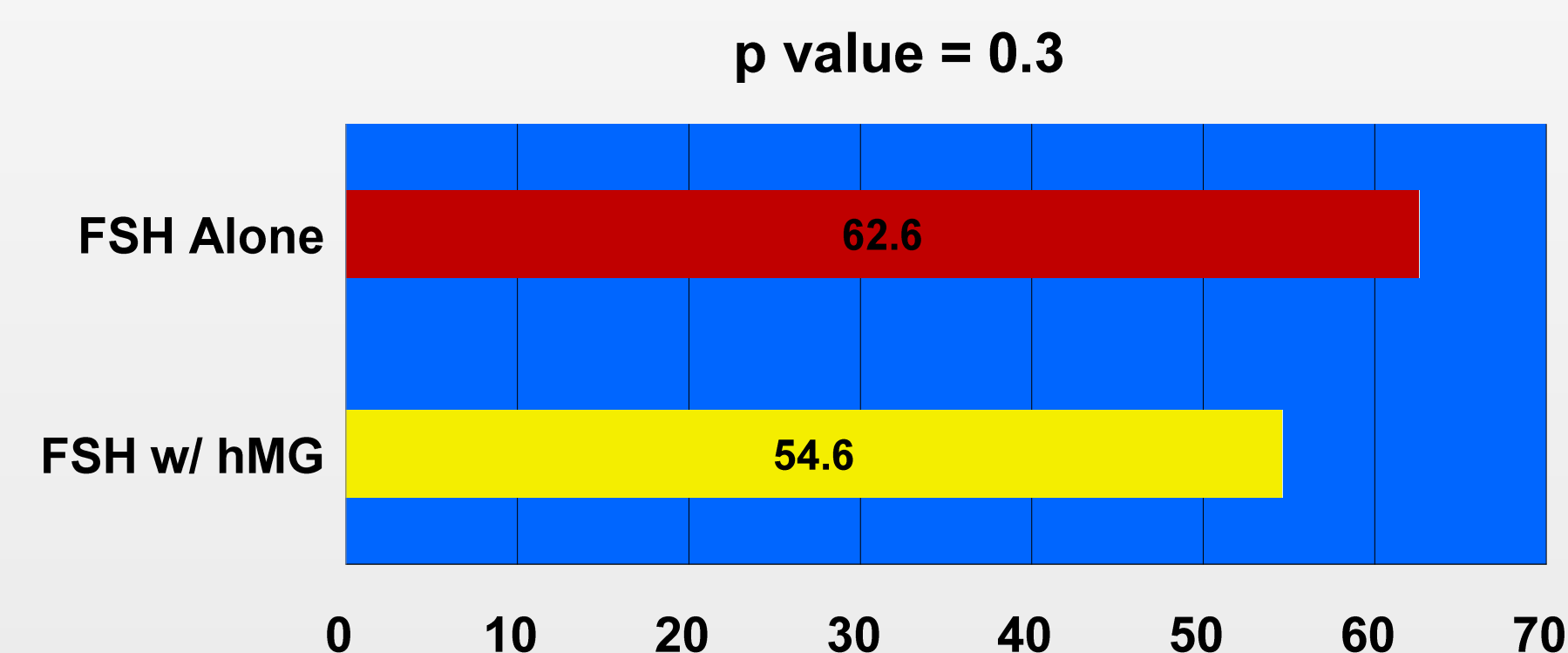
## Design

Prospective, trial in a large private infertility practice.

## Number of Injections per Cycle



## % Of Ongoing Pregnancies



## Materials & Methods

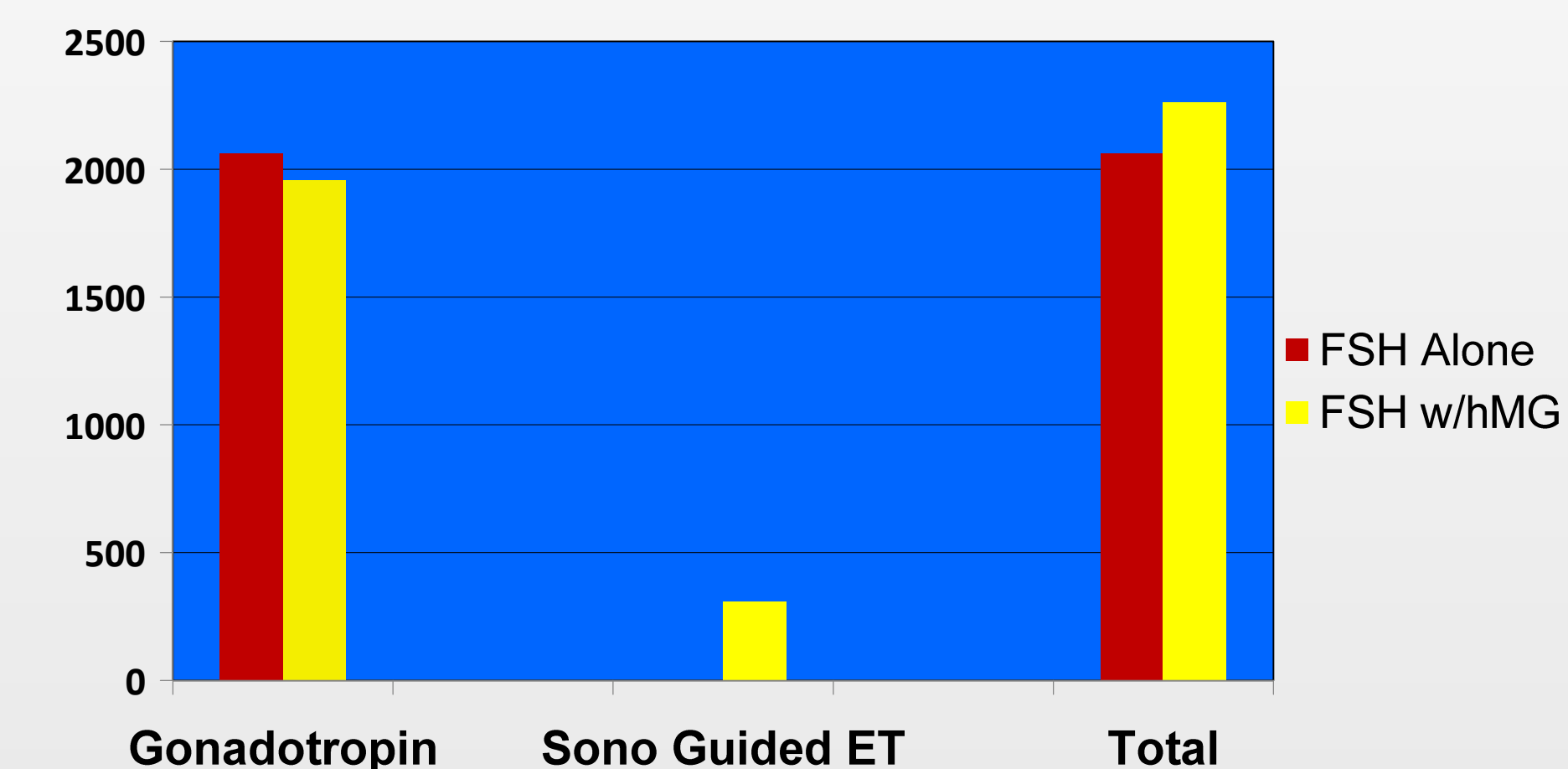
225 consecutive normal responders undergoing IVF in 2005 were included in this trial. All patients were stimulated with our standard oral contraceptive/leuprolide acetate down-regulation protocol. hCG was administered when the largest follicle achieved a mean diameter of 20 mm and transvaginal oocyte retrieval was performed 36 hours later. 139 patients were stimulated with recombinant FSH alone (Group 1), while 86 received combination therapy (Group 2). Due to physician preference, Group 2 patients also had their embryo transfers performed under sonographic guidance, whereas Group 1 patients did not. Statistical analysis was performed using t-test and chi square analysis.

## Results

There were no differences between the 2 groups in terms of patient age, days of stimulation, total FSH dose, or peak estradiol level. Similarly, there were no differences in the # of oocytes retrieved, the number of embryos transferred, or the number of embryos cryopreserved. Ongoing/delivered pregnancy rates were also similar. Group 2 patients did receive significantly more injections ( $p < 0.01$ ) and, although the total gonadotropin cost was lower in Group 2 (\$1955.31 vs. \$2060.23), this difference was offset by the additional expense (\$307.18) incurred with the sono-guided ET.

Table 1	Group 1 n=139	Group 2 n=86	P value
Patient Age (years)	34.6	34.3	0.3
Days of Stimulation	11.4	11.6	0.23
Total FSH Dose (units)	3253	3038	0.18
Medication Cost (\$)	2060.23	1955.31	
Number Of Injections	11.4	23.1	<0.01
Peak E2 (pg/mL)	2645	2646	0.5
# Oocytes Retrieved	17.8	16.0	0.5
# Embryos Transferred	2.5	2.4	0.18
# Embryos Cryopreserved	1.3	1.5	0.23
Sono Guided ET Cost	0.0	307.18	0.23
Ongoing/Delivered Preg/ET (%)	62.6	54.6	0.3

## Cost per Cycle



## Conclusion

Normal responders undergoing IVF responded similarly to recombinant FSH alone and combination r-FSH and hMG. While stimulation parameters did not differ significantly, patients receiving combination therapy paid approximately \$105 less for their medications, but required twice as many injections. Although Group 2 patients had their ETs performed using ultrasound guidance, which added approximately \$307 to the cost of their cycle, the pregnancy rates were not statistically different between the two groups. Neither the addition of urinary LH nor the routine use of ultrasound guided ET appears to increase ongoing pregnancy rates.