

Hypogonadism: Take Home Messages

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Hypogonadism: Take Home Messages

- **Lectures and debates**

- **Poster presentations**

Basic and clinical science

- **Podium presentations**

Basic and clinical science

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Controversies in testosterone deficiency: Who is a candidate for treatment and why?

Director Abe Morgentaler

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Dr. Zitzmann

- **Androgen receptor CAG repeat length may be related to clinical effects of testosterone**
- **Emphasises the importance of the symptoms of TDS (classical, obesity, depression and osteoporosis)**
- **Emphasizes the possible relationship between T and metabolic syndrome**

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Dr.Maggi

- Emphasizes the importance of symptoms in the diagnosis of TDS
- Libido is the sexual function more significantly affected by lowT levels.
- PSA < 0.7 g/dL may be related to very low levels of T

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Dr. Khera

- **Controversies regarding the clinical and laboratorial aspects in the diagnosis of TDS**
- **Emphasizes that treshold of T levels vary regarding symptoms, between individuals and may be also related to CAG repeat lenght of the androgen receptor**
- **Positive impact of TRT of hypogonadal in terms of survival**

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“Testosterone deficiency is clinical and not a biochemical condition”

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- **T improves response rates in PDE5i failures**

Hypogonadal men who do not respond to treatment of ED with PDE5 inhibitors may be rescued with androgen supplementation

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- **Testosterone replacement therapy should be used to treat men with Peyronie's disease ?**

There are limited data regarding the relationship of T levels and Peyronie's Disease.

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•Basic Science

Kataoka T et al., Japan in an experimental study using an animal model of Metabolic Syndrome:

Reduced levels of testosterone

Increased oxidative stress in cavernous tissue

Increased smooth muscle injury

Increased endothelial dysfunction

TRT in those animals:

Suppressed inflammatory response

Protected smooth muscle injury

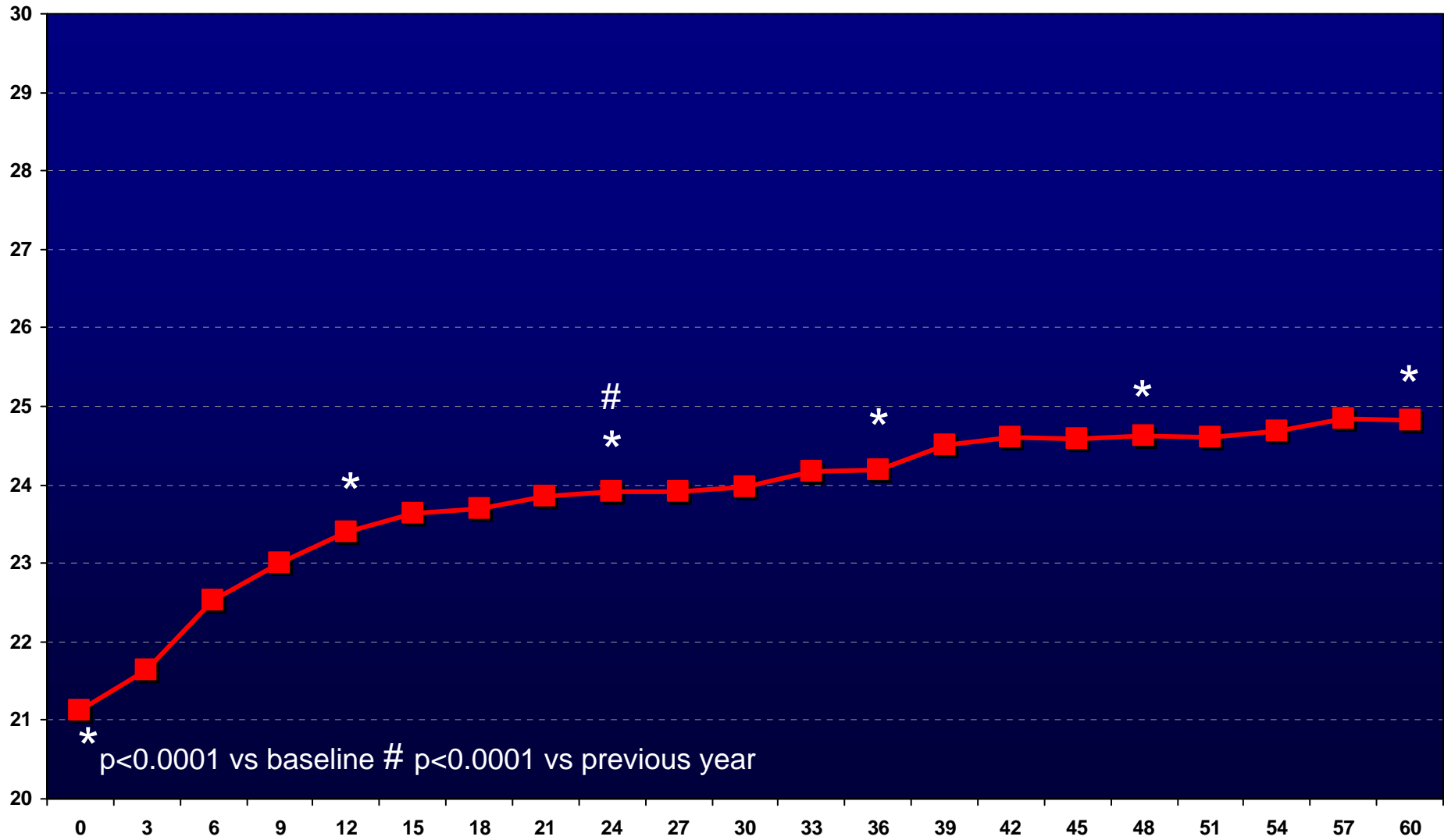
Improved endothelial dysfunction

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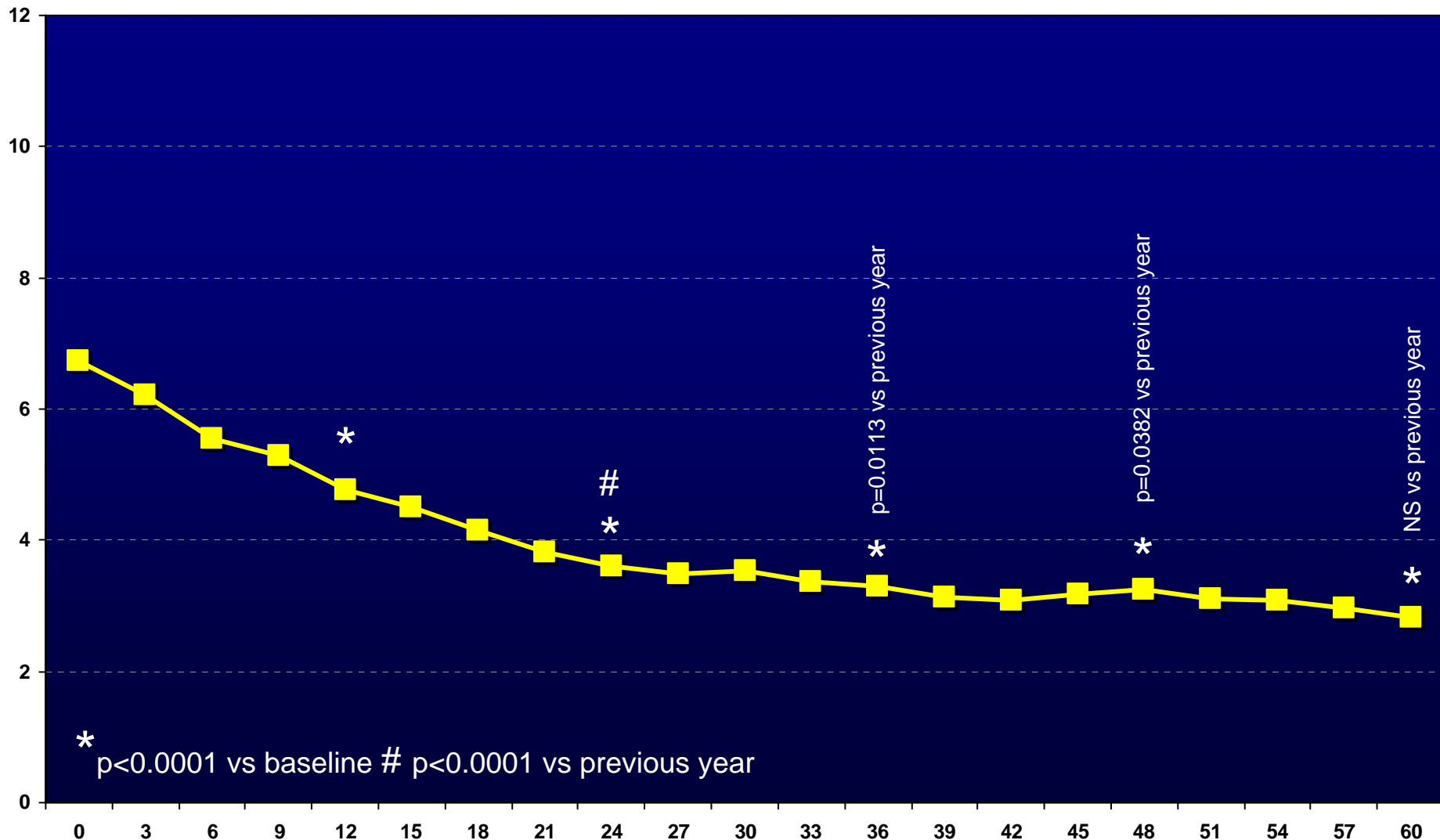
•Clinical Studies

- Shin et al., South Korea demonstrated, in a placebo control study, that hypogonadal men demonstrated beneficial effects of TRT on cognitive evaluation as well as on depression scores.
- Saad F et al., Germany, in a large number of ypogonadal men (n:255) demonstrated **continuously** beneficial effects of TRT (**up to 60 months**) on erectile function, urinary symptoms, and inflammatory response
- Zitzmann et al., Germany, reported their data on 334 hypogonadal men under TRT **up to 15 years**, with significant and **continuously** improvement in lipids, BMI and waist circumferences

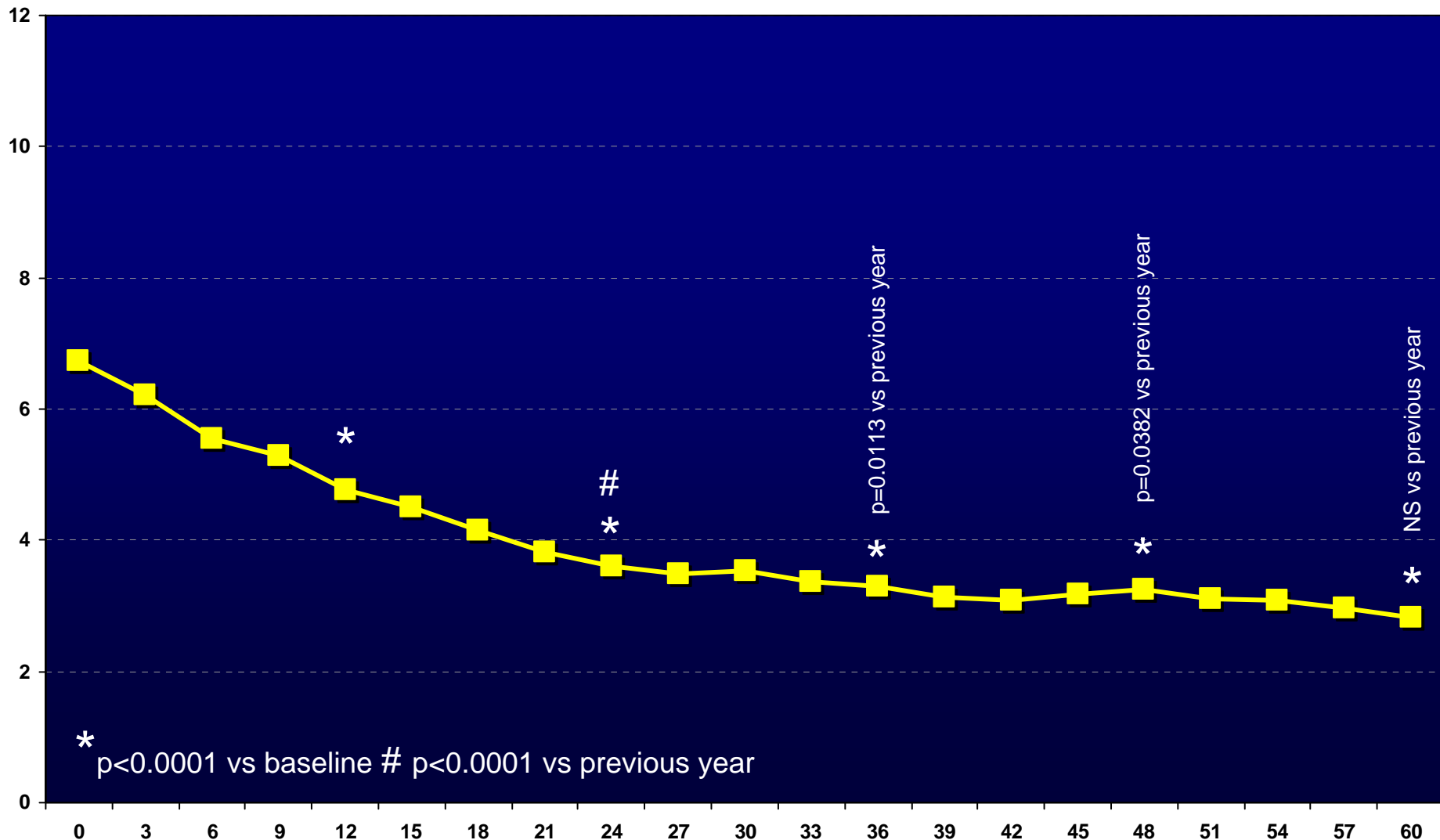
International Index of Erectile Function (IIEF-EF) in 255 Middle-Aged to Elderly Men Treated with TU up to 60 mo



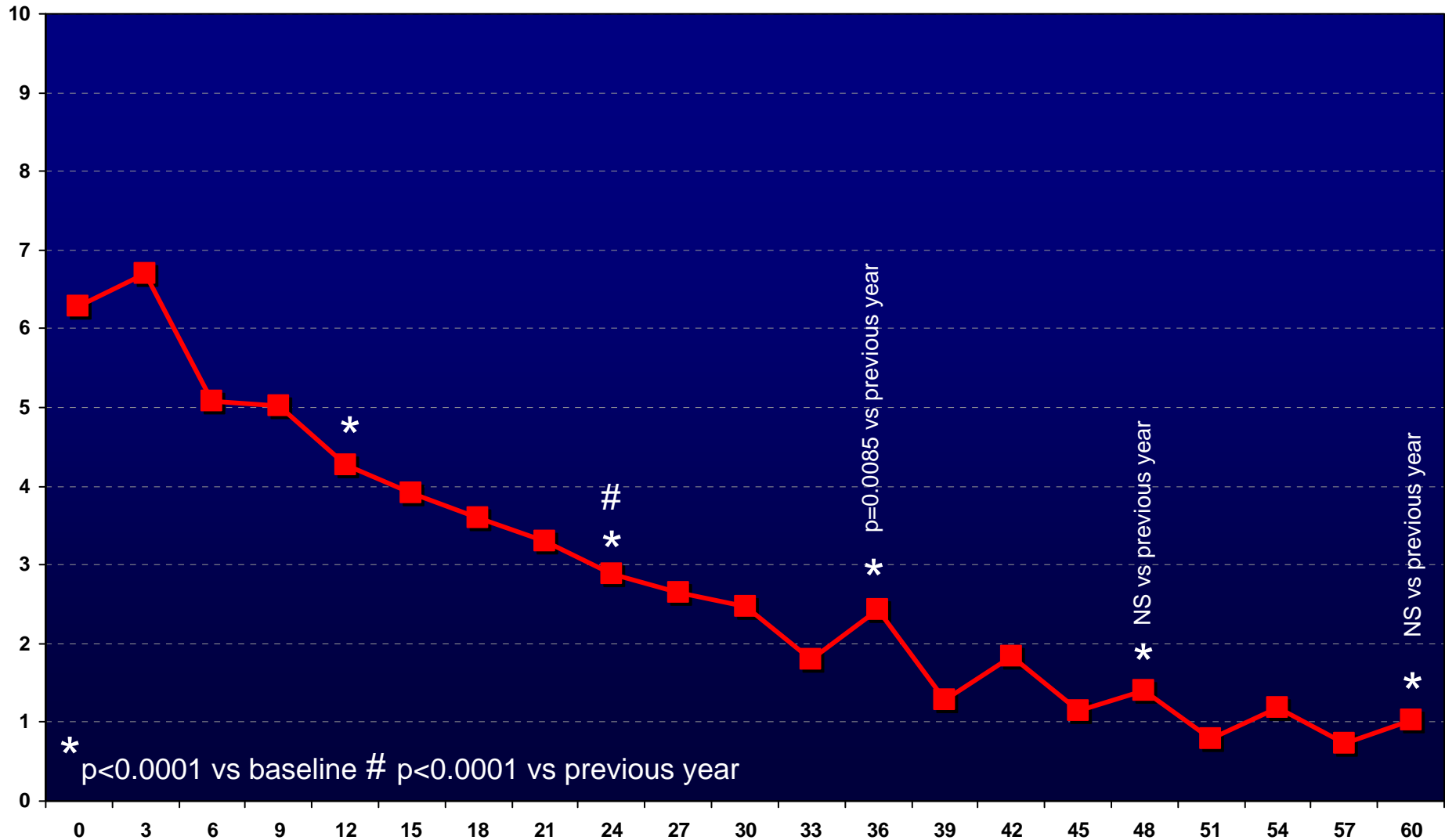
International Prostate Symptom Score (IPSS) in 255 Middle-Aged to Elderly Men Treated with TU up to 60 mo



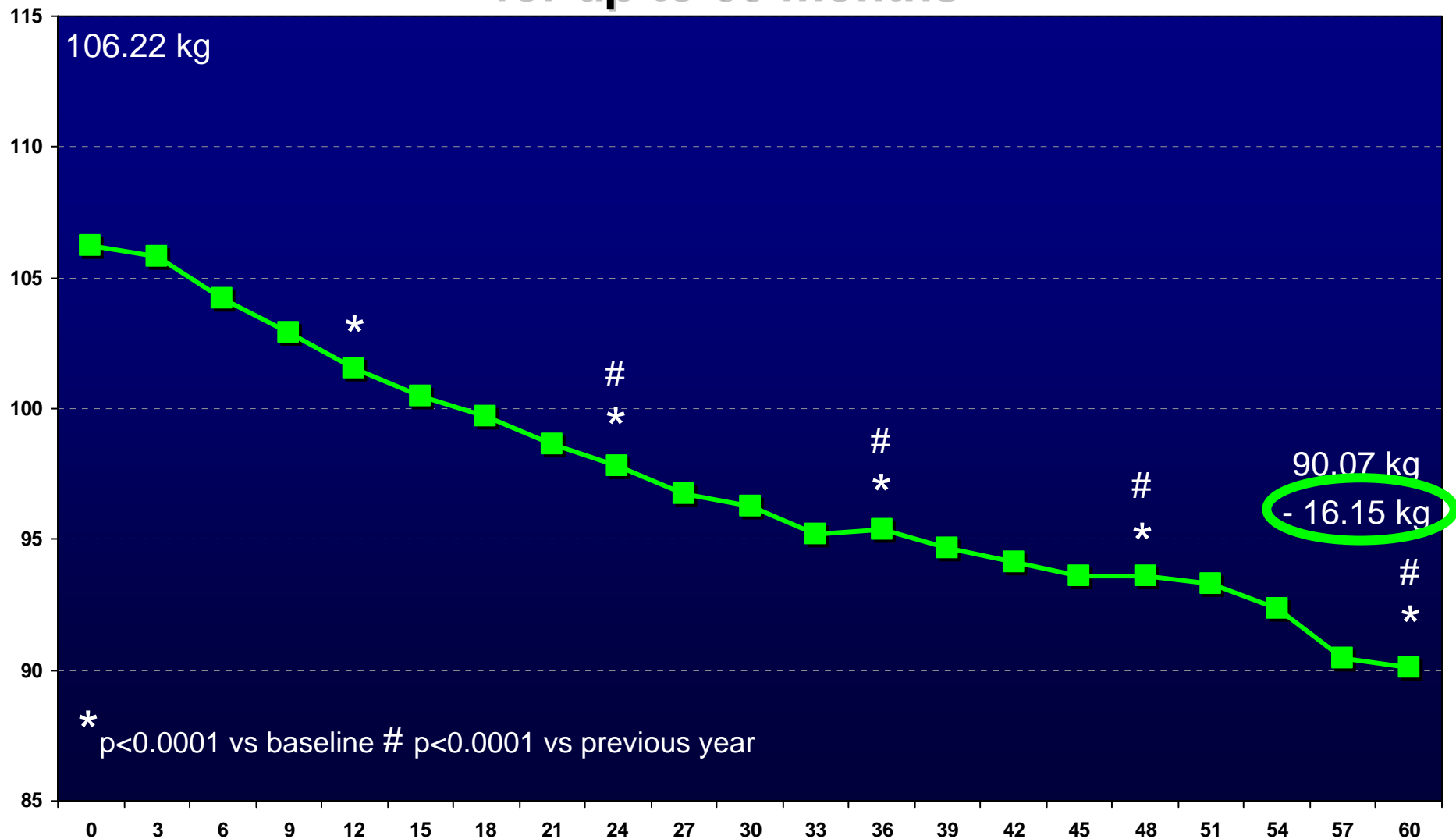
International Prostate Symptom Score (IPSS) in 255 Middle-Aged to Elderly Men Treated with TU up to 60 mo



C-Reactive Protein (CRP, mg/dl) in 255 Middle-Aged to Elderly Men Treated with TU up to 60 mo



Body Weight (kg) in 255 Hypogonadal Men (mean age: 60.6 years) Treated with Testosterone Undecanoate Injections for up to 60 months



* p<0.0001 vs baseline # p<0.0001 vs previous year

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Testosterone may have beneficial effects:

- Reducing inflammatory response
- Improving nitric oxide (NO) production
- Reducing a relative ischemia associated

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- Morrison et al., TRT in hypogonadal men with sickle cell disease does not promote priapism occurrences and rather it possibly improves erectile ability

- Schoenfeld et al., reported a relatively low adherence and persistence of TRT in patients treated with topical gel, and reported that this may be related to:

 - Inadequate levels of T

 - Cost of therapy

 - Co-morbid conditions

 - Expectations of great beneficial

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Comparison of Prostate Cancer Incidence

Study Cohort	Dr. Haider	Prof. Yassin	PLCO [1]	ERSPC [2]
N	255	261	38,343	72,891
Follow-up	5.5 years	5.5 years	7 years	11 years
Proportion	1.2%	2.3%	7.35%	9.6%
Incidence per 10,000 patient years	30.3	54.4	116	96.6

[1] Andriole G et al. New Engl J Med 360(13): 1310-1319 (2009)

[2] Schröder F et al. New Engl J Med 366(11): 981-990 (2012)

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- Matsushita et al., Memorial Sloan-Kettering Cancer Center, presented the experience with TRT in 71 hypogonadal men after radical prostatectomy, including cases of high risk prostate cancer , reporting only 1 case of biochemical recurrence.

These preliminary results suggest that TRT in hypogonadal men treated for high risk prostate cancer seems to be safe in terms of biochemical recurrence of the disease.