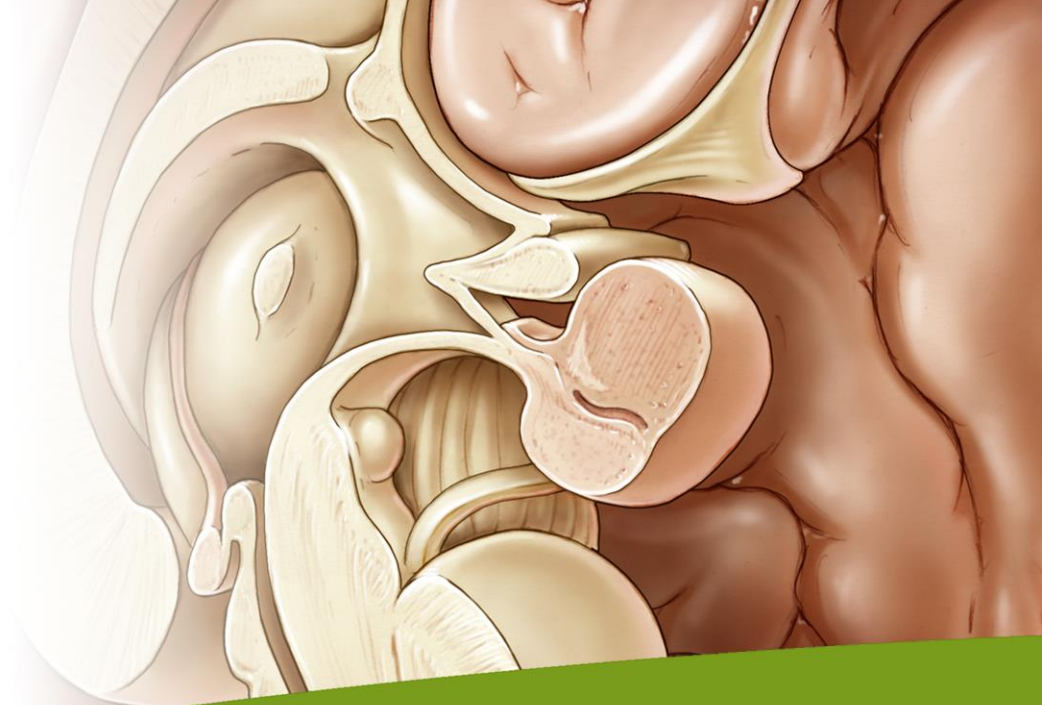


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# Prevalence of Depression in Patients with Pituitary Adenomas: Association of Depression with Perceived Social Capital

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# BACKGROUND

- Pituitary gland ↔ limbic system → psychological and psychiatric symptoms
- 2° neuroendocrine effectors linked to depression. Brain-Derived Neurotrophic Factor (BDNF) (Berry 2011)
- Sleep disturbance → Depression
- Social capital linked to psychological & physical health
- Social deprivation linked to depression

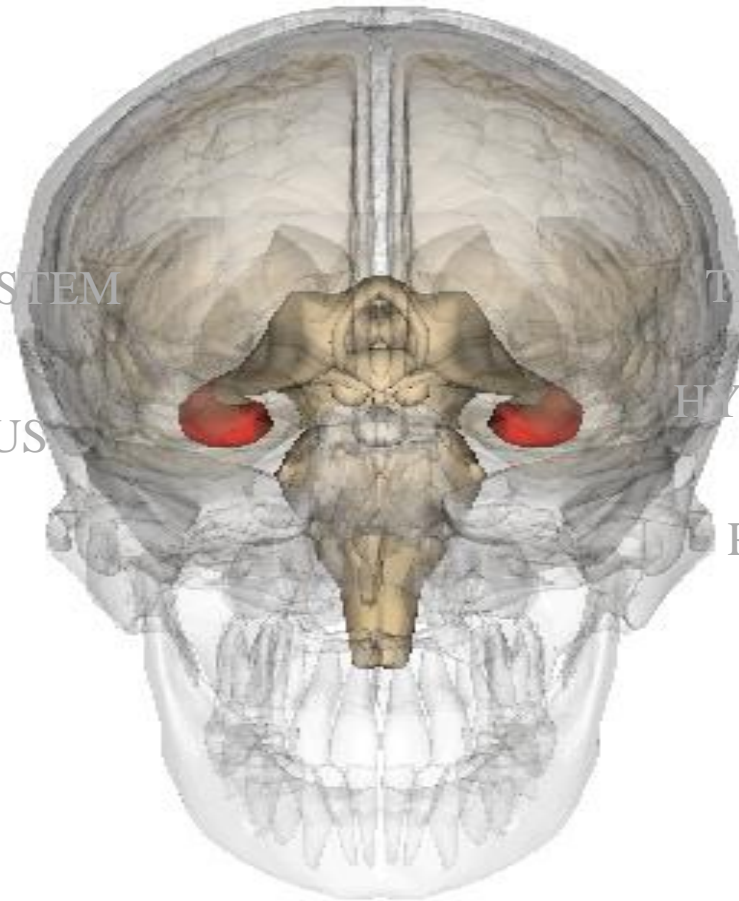
LIMBIC SYSTEM

THALAMUS

HIPPOCAMPUS

HYPOTHALMUS

PITUITARY

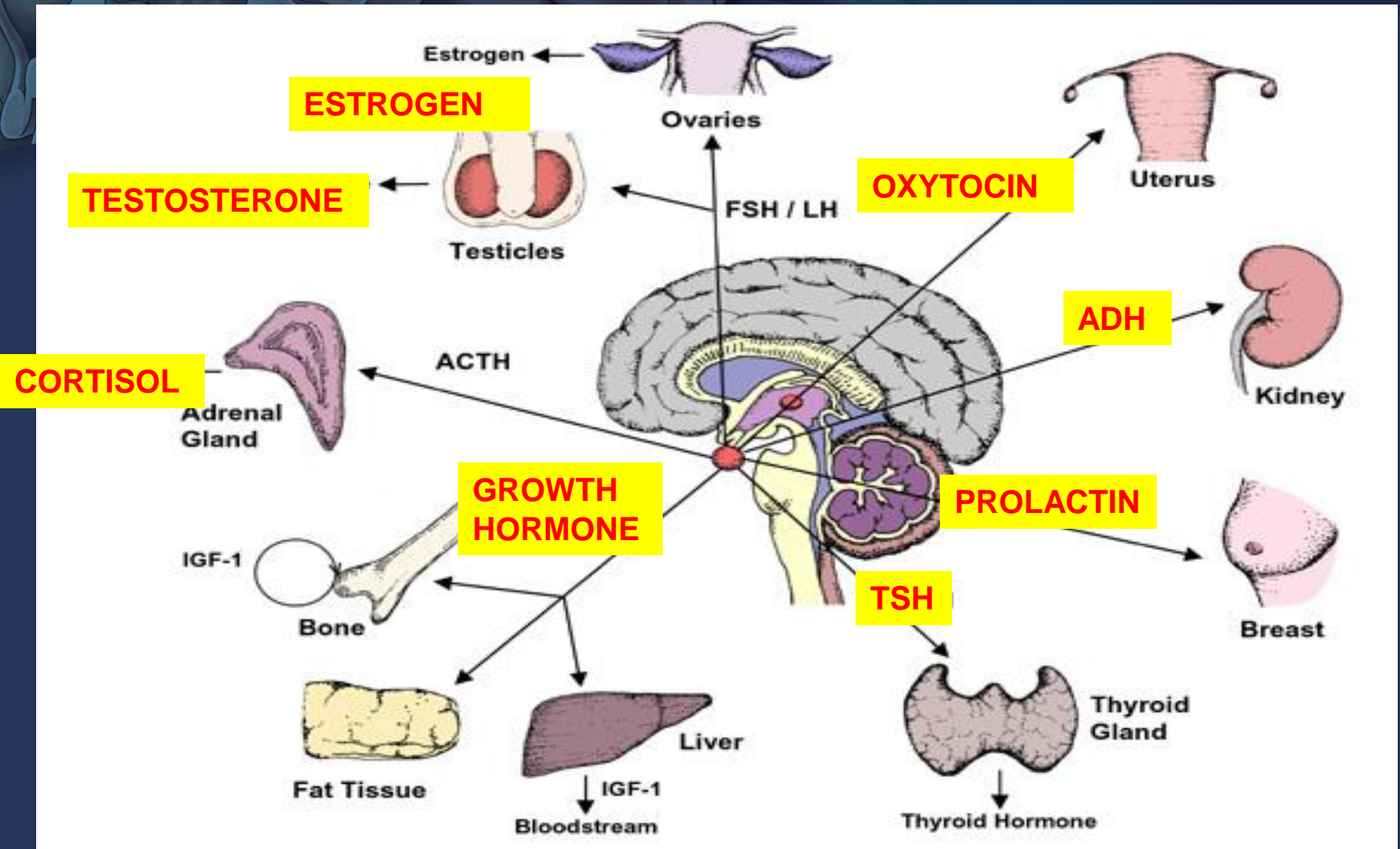


# Prevalence of Pituitary Adenomas

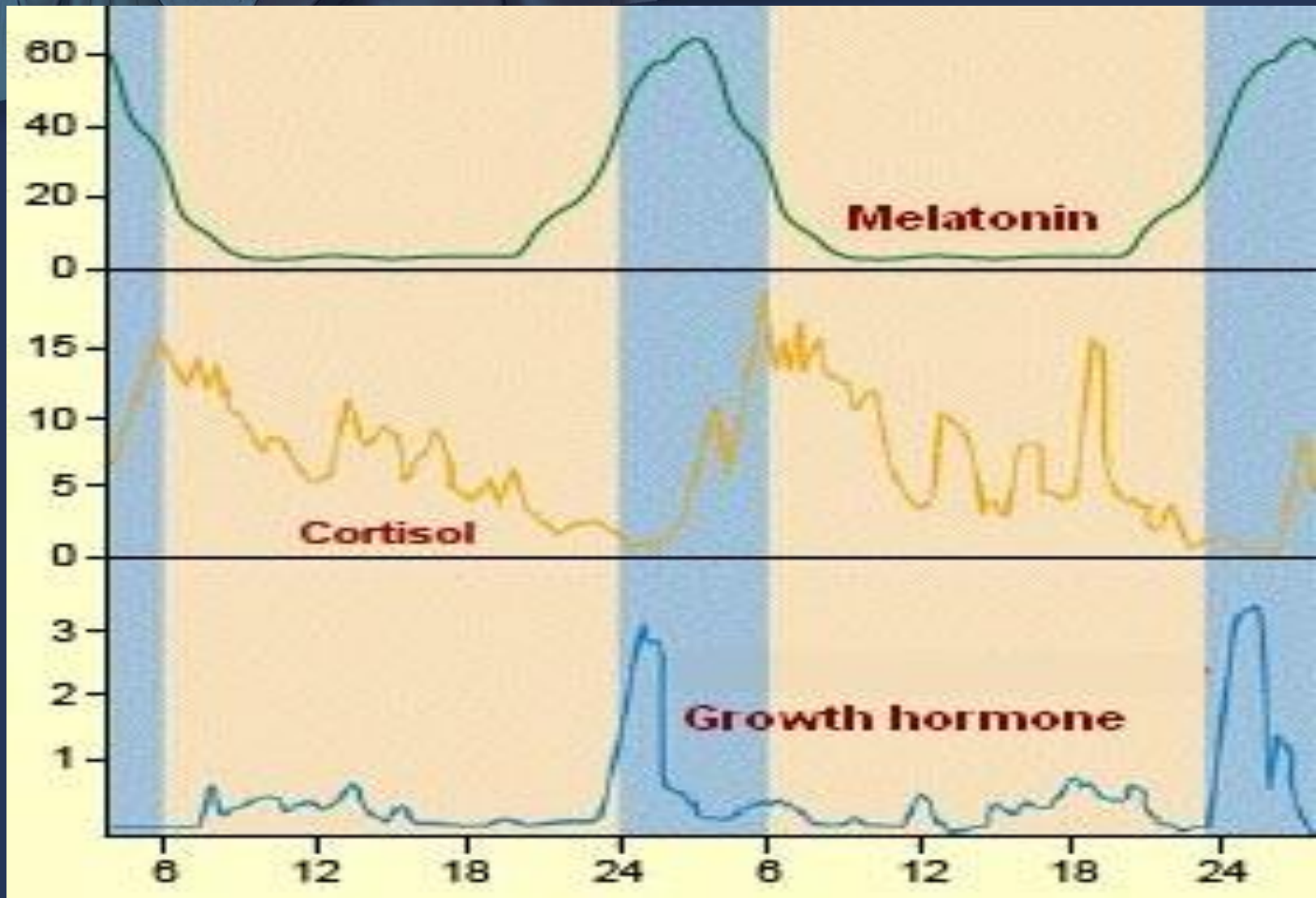
## Incidentalomas

- ▶ 15- 26% of the population estimated to have PA
- ▶ 20 % at autopsy
- ▶ 1: 6 from radiologic evidence
- ▶ 15 % of all brain tumors
- ▶ Incidence increases with age: 30 % at 50-60 yrs

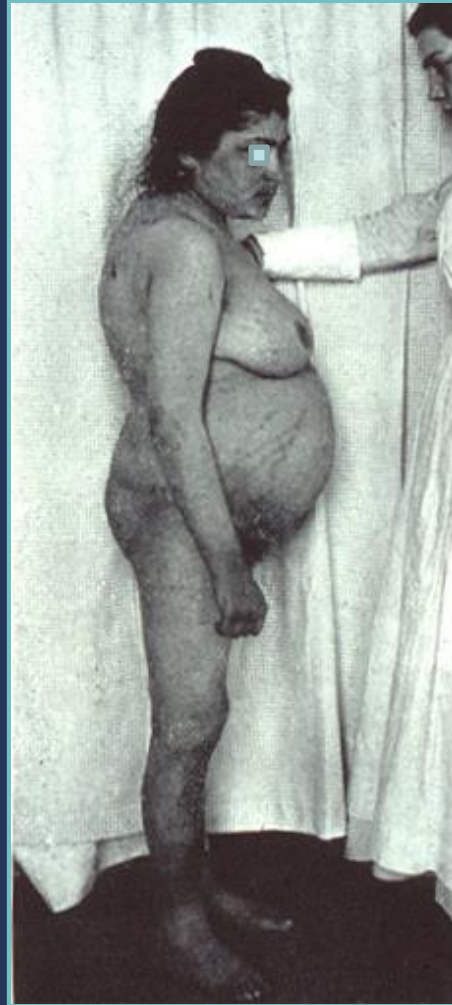
# PITUITARY RESPONSIBILITIES



# Circadian Pituitary Hormone Production



# CUSHING'S DISEASE



## THE PITUITARY BODY AND ITS DISORDERS

CLINICAL STATES  
PRODUCED BY DISORDERS OF THE  
HYPOPHYSIS CEREBRI

BY  
HARVEY CUSHING, M.D.

SENEY PROFESSOR OF SURGERY, HARVARD UNIVERSITY; SURGEON-IN-CHIEF, THE PETER BENT  
BRINHAM HOSPITAL; FORMERLY ASSOCIATE PROFESSOR OF SURGERY,  
THE JOHNS HOPKINS UNIVERSITY

AN AMPLIFICATION OF THE HARVEY LECTURE  
FOR DECEMBER, 1910

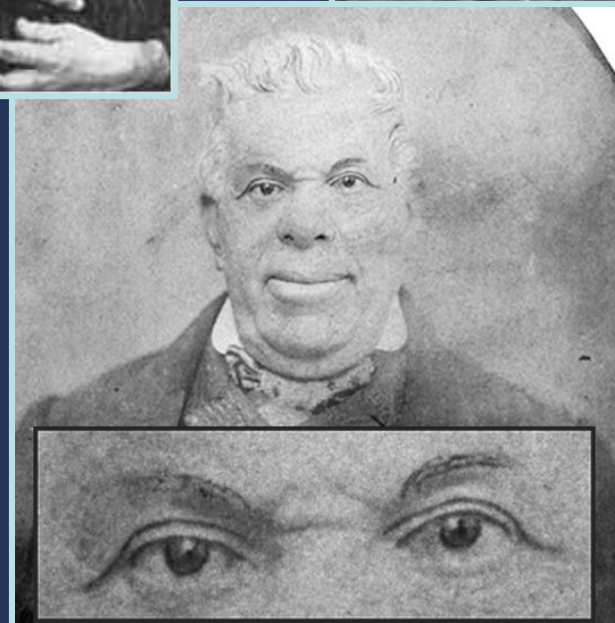
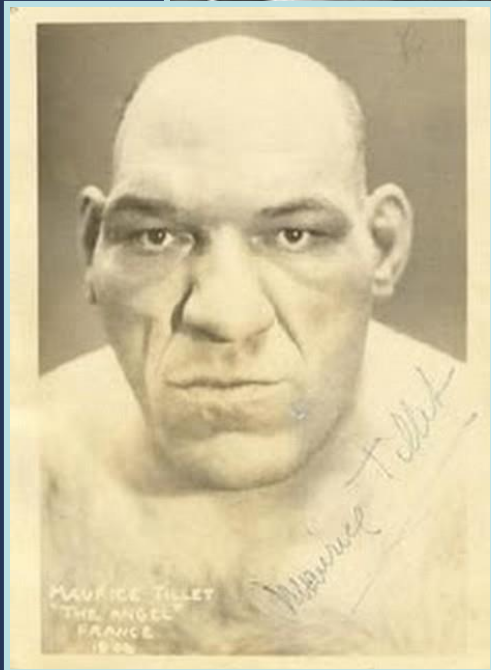
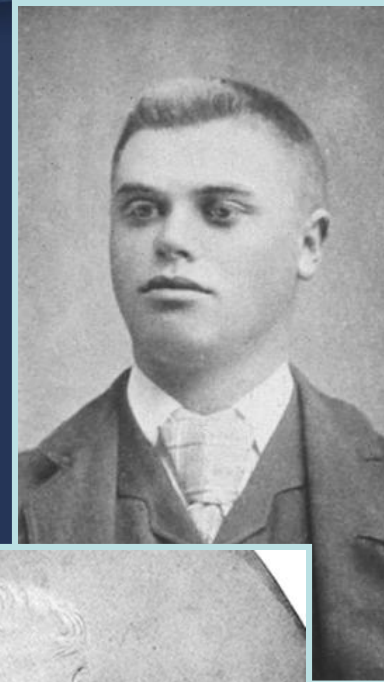
with ILLUSTRATIONS



PHILADELPHIA & LONDON  
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# ACROMEGALY





# AIM

- To investigate the prevalence of depression in patients who were newly diagnosed with pituitary adenomas  
and
- To evaluate the impact of perceived interpersonal and social support on depression severity.
- Secondary analysis
  - the prevalence of depression by tumor hormonal expression including:
    - non-functional adenomas (NF)
    - prolactinomas (P)
    - growth hormone (GH) secreting adenomas
    - adrenocorticotrophin (ACTH) secreting adenomas.

# DEFINITIONS:

- **Social Support:**

process of interaction between relationships which improves coping, self esteem, belonging and competence through actual or perceived changes physical or psychological resources.

- **Social Capital:**

social support as an external positive resource

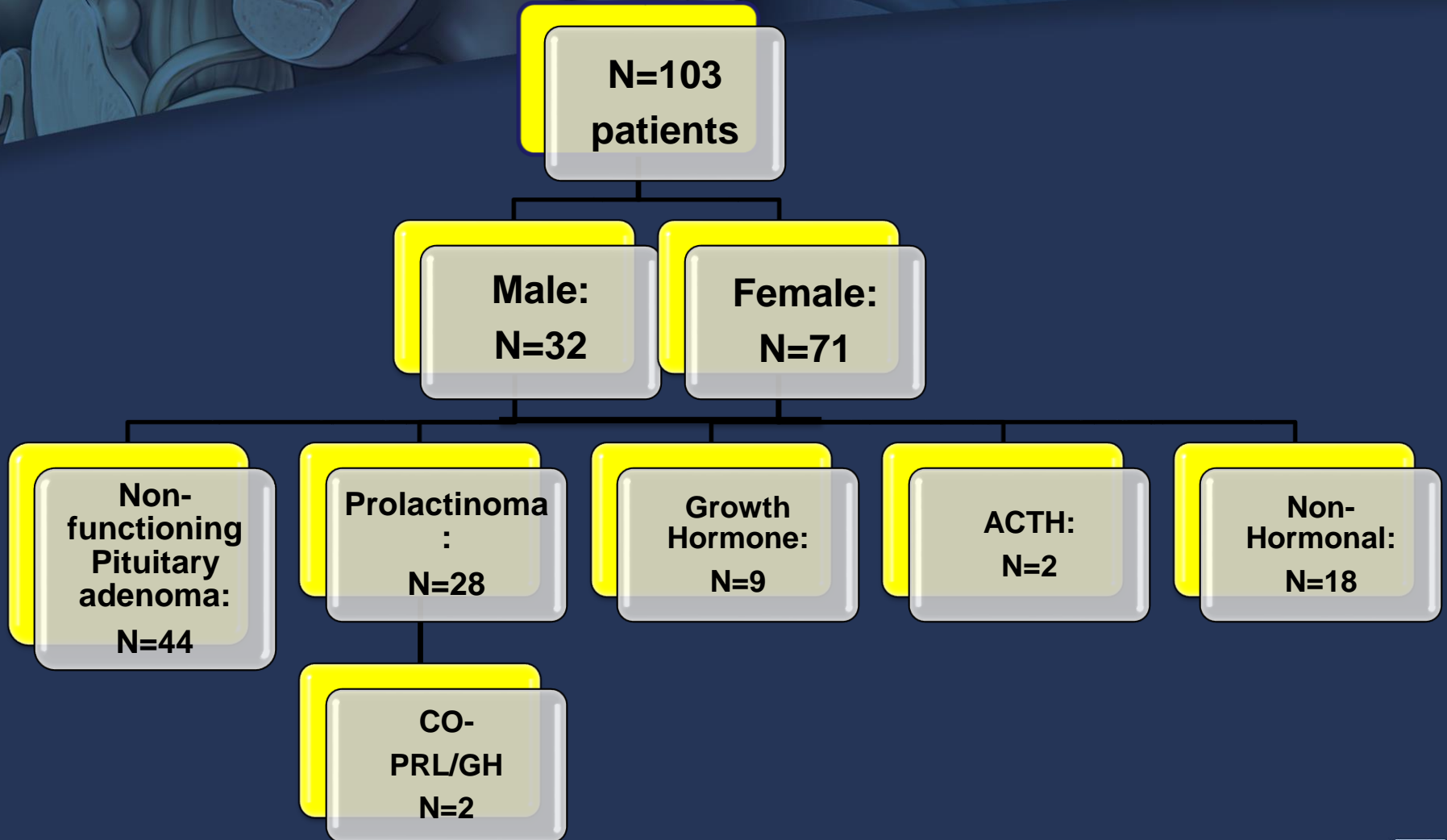
- **Depression:** As per DSM IV

( Mattson 2011)

# STUDY METHODS:

- Prospective Questionnaire- 27 questions
  - 21 question Beck Depression Inventory II (BDI-II)
  - 6 questions designed to solicit the patient's perception of social support from family member, spouse/partner and friends
- Cronbach's alpha 0.952.
- Included: New patients with adenoma
- Excluded: unstable meds in prior 6 mths  
major life event in prior 6 mths
- Convenience sample

# RESULTS



# RESULTS:

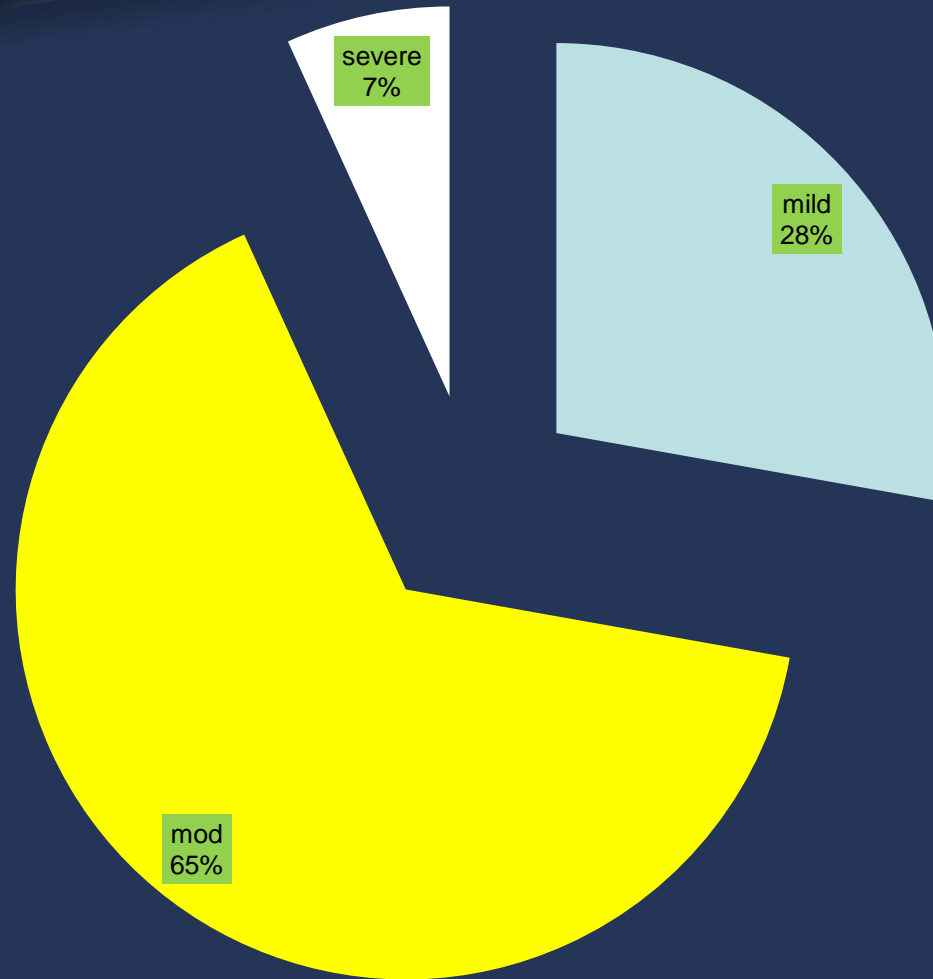
## Demographics

Dx	N	Male	Female	Age
NF	44	18	16	49.9
P	28	6	22	36.75
GH	9	4	5	49.3
CUSH	2	0	2	54
CO	3	2	4	48
LH	6	0	6	43.6
RC	6	1	5	49.2
Other	5	1	4	45
Overall	103	32	64	46.9

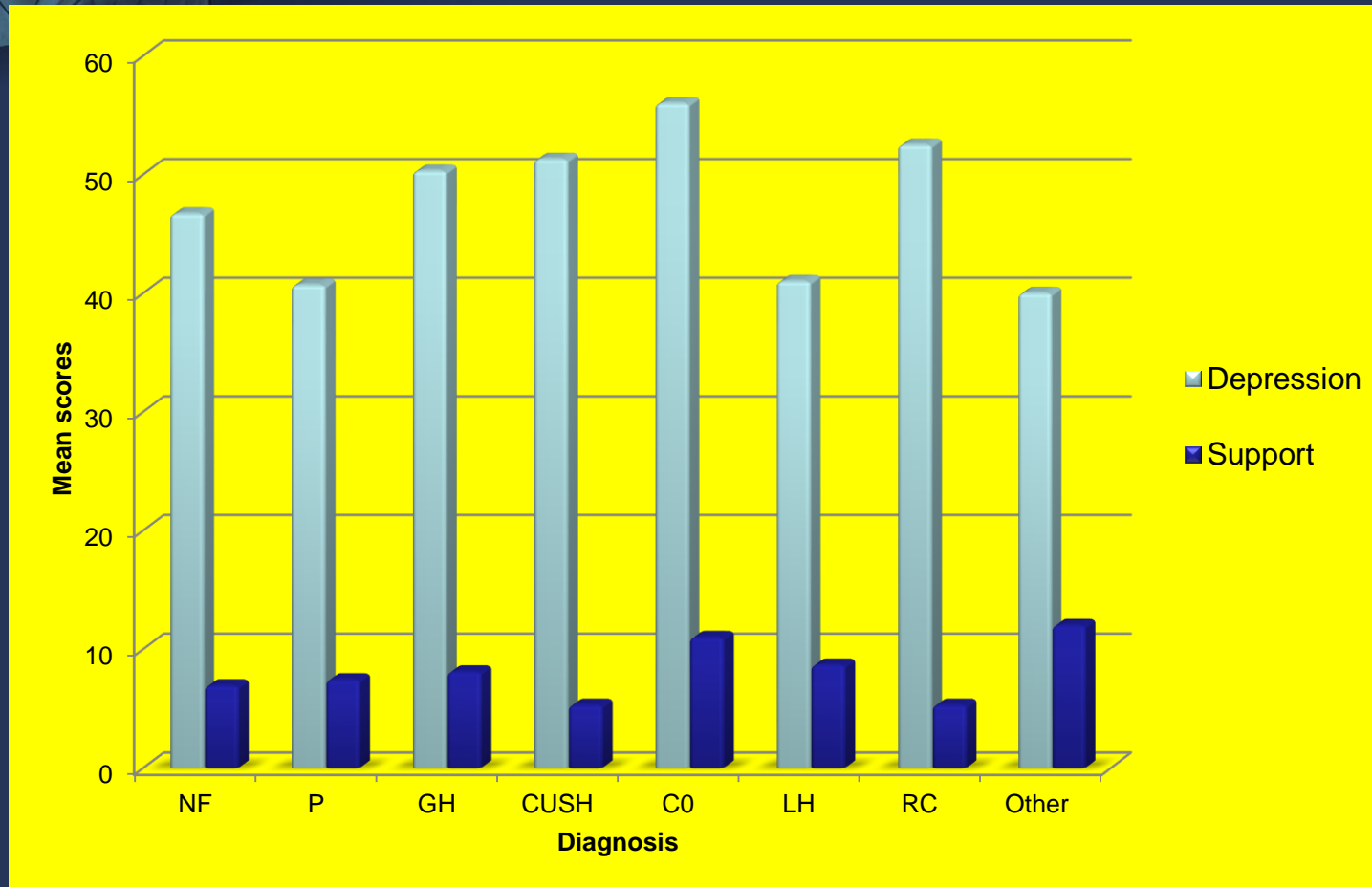
# Difference between Diagnosis groups

<b>N=103</b>	<b>Sig.</b>
Mean Depression Scores	.334
Mean Support Scores	.459
TumorSize	.002
Gender	.179
Age	.095

# RESULTS: Depression Prevalence



# Depression vs Support per Diagnosis





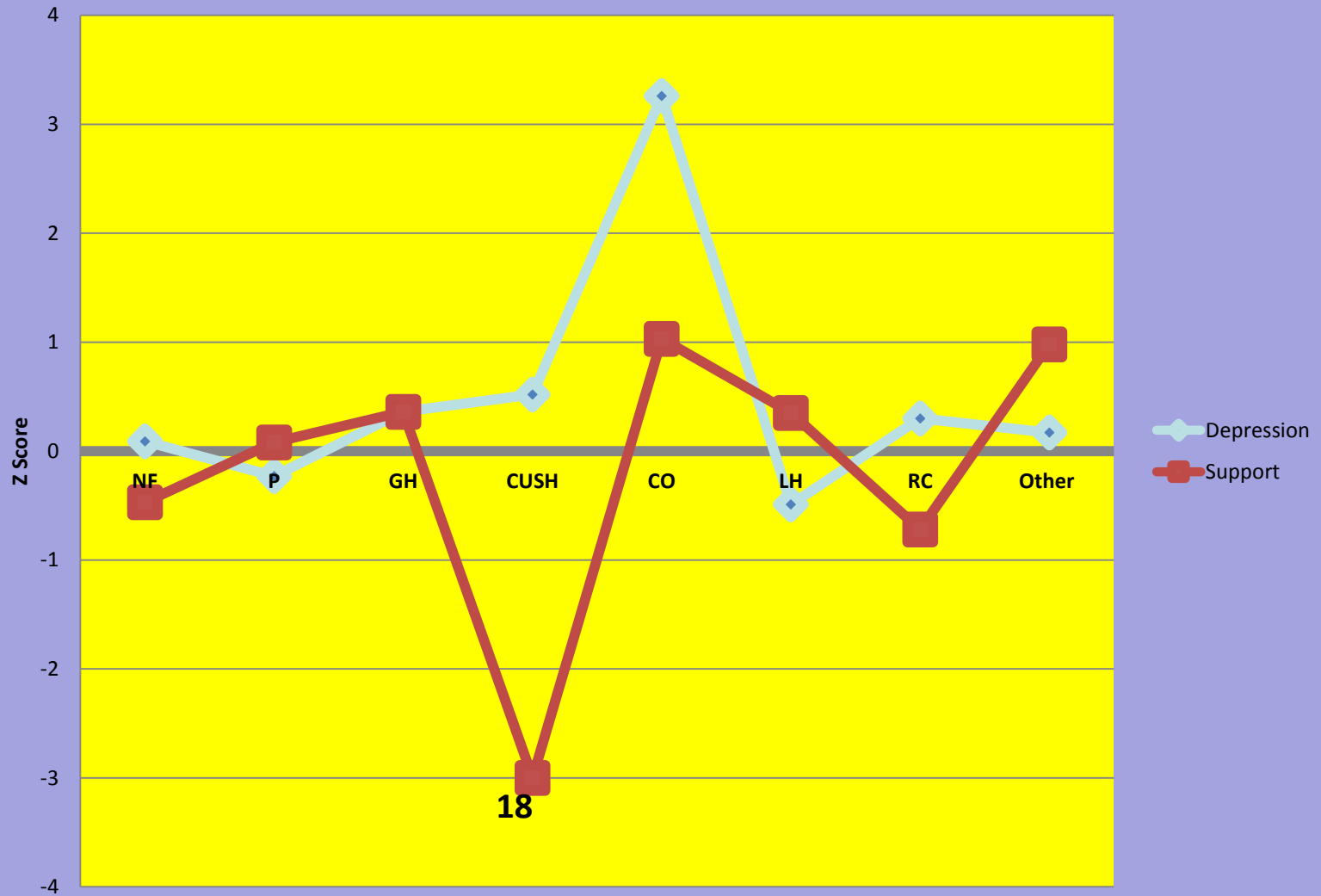
# Correlations

Depression and social support

$r = 0.315, p = 0.001$

No correlation between depression and any diagnosis

# Standardized Scores



# Study Limitations

- Self report
- No general population standardization
- Limited sample by diagnosis
- Needs follow up

# Conclusion:

- Depression is common in patients with pituitary lesions
- Most patients reported high levels of social support despite diagnosis and level of depression
- Some diagnoses may be more susceptible to severe depression than others.
- Severe levels of clinical depression warrant further evaluation
- Tools for early identification of at risk patients provide for timely intervention and improved outcomes.
- Further evaluation of the impact of specific social capital is warranted.

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A scenic view of a city at sunset. In the foreground, a cable car is suspended from a cable, moving towards the viewer. The city below is illuminated by the warm glow of the setting sun, with buildings and a bridge visible. In the background, there are mountains and a large body of water. The sky is a mix of blue, orange, and yellow.

**Thank you.**

**Questions?**

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