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SPECIFICITE DE LA PRISE EN CHARGE DE LA PATHOLOGIE RACHIDIE DANS DIFFERENTS PAYS



AUTRICHE

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The Austrian Health System



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Perfect solution or purely chaotic?



„Number of GPs will be reduced“

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Basic problem



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- ◆ Stagnant population in developed countries till 2030
- ◆ People > 60 Years + 39 %
- ◆ People > 80 Jahre + 86 %



Causes for 35 additional life years



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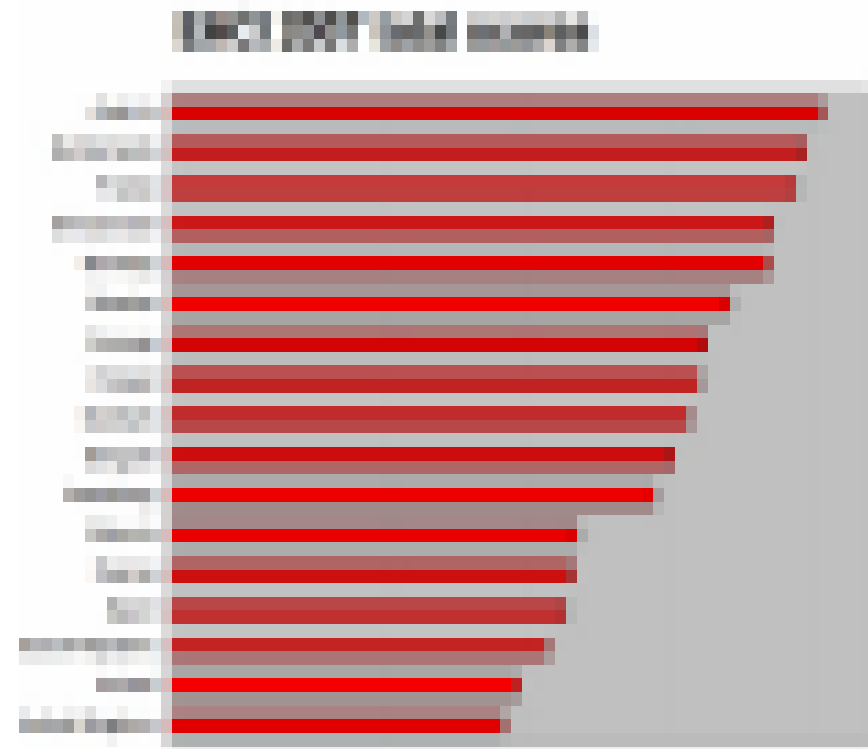
- ◆ Medical treatment: 4 to 5,5 years
- ◆ Medical prevention 1,5 to 2,2 years
- ◆ Environment, behaviour: 27 to 28 years

➤ **80 % of increased life expectancy due to non – medical reasons!**

Best Health System In Europe 2007



- ◆ Short waiting lists (GP, OR)
- ◆ Good treatment results
- ◆ Good patient information



Health Consumer Powerhouse 2007

WHO rating 2000



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- ◆ 191 countries:
 - requirements
 - costs
 - fairness of financing
 - expectancies of patients were met

- Austria number 9 worldwide

WHO 2000



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Ranking	Health expenditure	Health status of society
Austria	6	17
USA	1	24
France	4	3
Sweden	7	4
Japan	13	1



A	B	CH	UK	I	D	E	F
83.858 km ²	30.158 km ²	41.284 km ²	130.395 km ²	301.263 km ²	356.854 km ²	493.486 km ²	550,000 km ²
8,3 M.	10,5 M.	7,5 M.	49,5 M.	57,3 M.	82,6 M.	44,7 M.	59,6 M.
100 E./km ²	350 E./km ²	181 E./km ²	380 E./km ²	190 E./km ²	230 E./km ²	110 E./km ²	108 E./km ²

DRG system in Austria

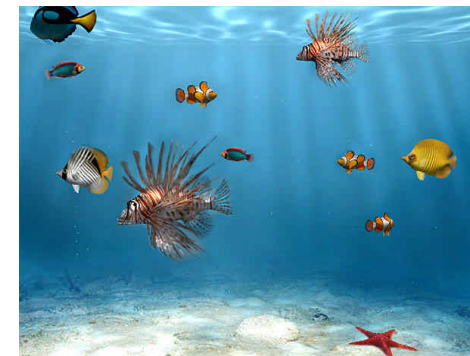


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- ◆ DRG oriented financing since 1997
- ◆ Based on ICD 10

- ◆ MEL– medical treatments (group / single): 27 chapters, 1.226 treatments
- ◆ Resulting in 1300 LKF (DRG) numbers (2008), 1700 (2009)

- ◆ Financially closed system, adapted every 3-4 years
- ◆ Deficit in public hospitals will be fully covered by state
 - No competition
 - Automatic coverage





MEL in spine

- ◆ 28 MEL (only)

- ◆ Advantage: new procedures are automatically coded under the „closest“ MEL

- ◆ Ex: interspinous spacers under
 - MEL 1261: dorsal fixation without metal

- ◆ MEL for new procedures can last up to 4 years



New trend

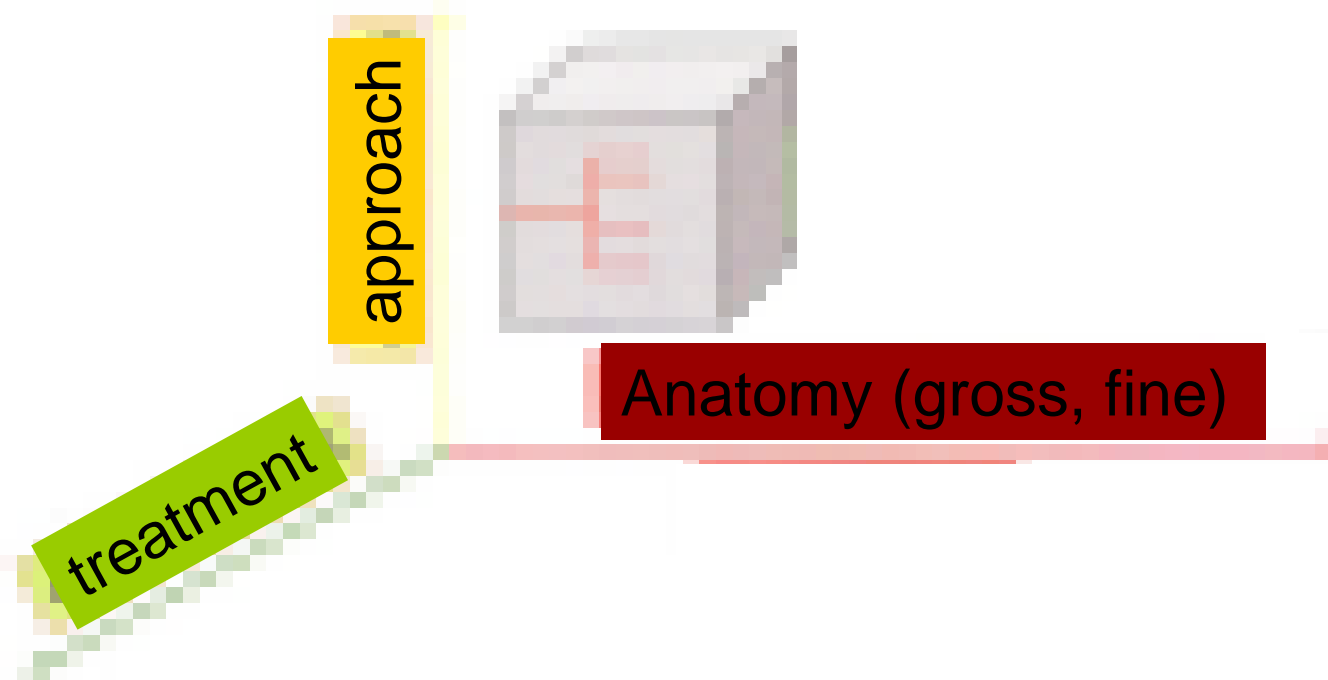
- ◆ Creation of „spine centers“ through restrictions of funding:
- ◆ Example BKP: funded only after permission of the social security
- ◆ Min. 50 procedures per year not to lose funding
- ◆ Actually only ~ 12 hospitals can do this procedure and be paid

- ◆ Planned next: TDR, scoliosis etc.

DRG 2009 – Multiaxial System (after CCAM, ICD10-PCS)



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BKP - Calculation 2009



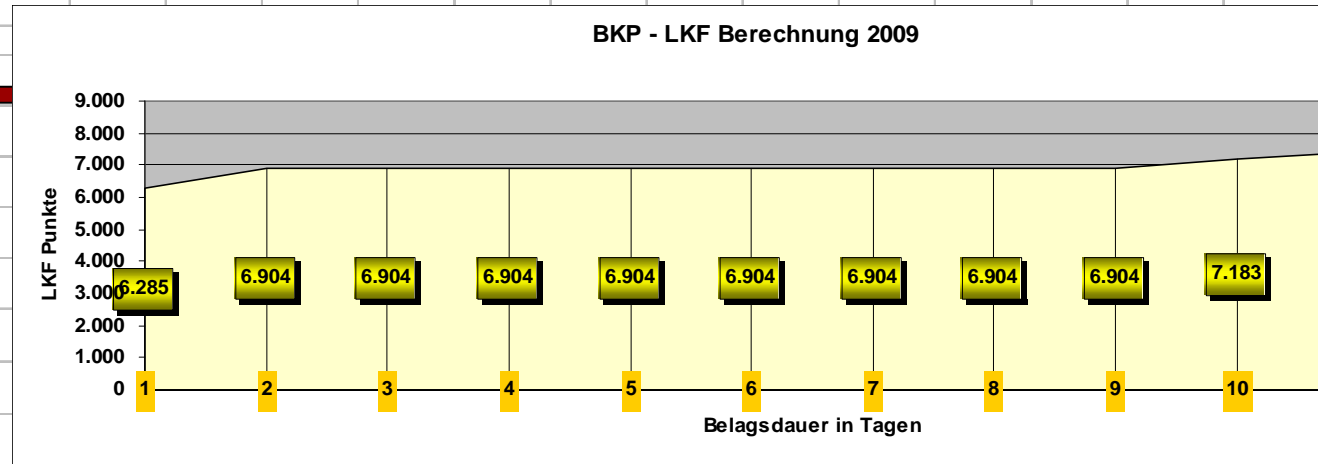
MEL01.17 (Model 2009) Minimal-invasiv Interventions on the spine

Knot 1 SPEZMEL LH020 lump compensation: 6.904

DRG code -> LH020 Reduction and filling of a vertebral body through percutaneous access

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total points	6.904	
lump compensation for intervention	5.047	
lump compensation for day care	1.857	
extra compensation	4.557	
extra per day:	310	
Hospital stay	lower threshold	2
	mean	6
	upper threshold	9



Belagsdauer in Tagen	1	2	3	4	5	6	7	8	9	10	11	12
LKF Punkte	6.285	6.904	6.904	6.904	6.904	6.904	6.904	6.904	6.904	7.183	7.437	7.669
	Outlier	Inlier							Outlier			
LKF Punktwert 1 (€)	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
KH Faktor												
Erstattung 1 (€)	0	0	0	0	0	0	0	0	0	0	0	0
LKF Punktwert 2 (€)	0,63	0,63	0,63	0,63	0,63	0,63	0,63	0,63	0,63	0,63	0,63	0,63
Erstattung 2 (€)	3.960	4.350	4.350	4.350	4.350	4.350	4.350	4.350	4.350	4.525	4.685	4.832

Zuschlag		
10	11	12
279	254	233

LKF Punktwert 2 = LKH in ÖÖ

Berechnung bei unterschreiten der Belagsdaueruntergrenze

$$\frac{\text{Punkte/Fall}}{=} = \text{LK} + \frac{(\text{LDFP} - \text{LK}) * (\text{X} + 1)}{(\text{BDUG} + 1)}$$

Legende:

- X... Anzahl der vom Patienten im Krankenhaus verbrachten Belagstage; diese müssen unter der Belagsdaueruntergrenze der zugeordneten LDF liegen
- LK... Leistungskomponente der zugeordneten LDF
- LDFP... LDF-Pauschale
- BDUG... Belagsdaueruntergrenze der zugeordneten LDF

State	Euro per point	multiplication
Vienna	0,83	1,00 to 1,12
Lower Austria	0,997	None
Upper Austria	0,62	None
Salzburg	1,05	None
Styria	0,74	1,05 to 1,3
Carinthia	1,18	1,10 to 1,20
Tyrol	0,77	None
Vorarlberg	1,325	1,02 to 1,07
Burgenland	Lump compensation per hospital	None
Private holding association (PRIKRAF)	0,38	none

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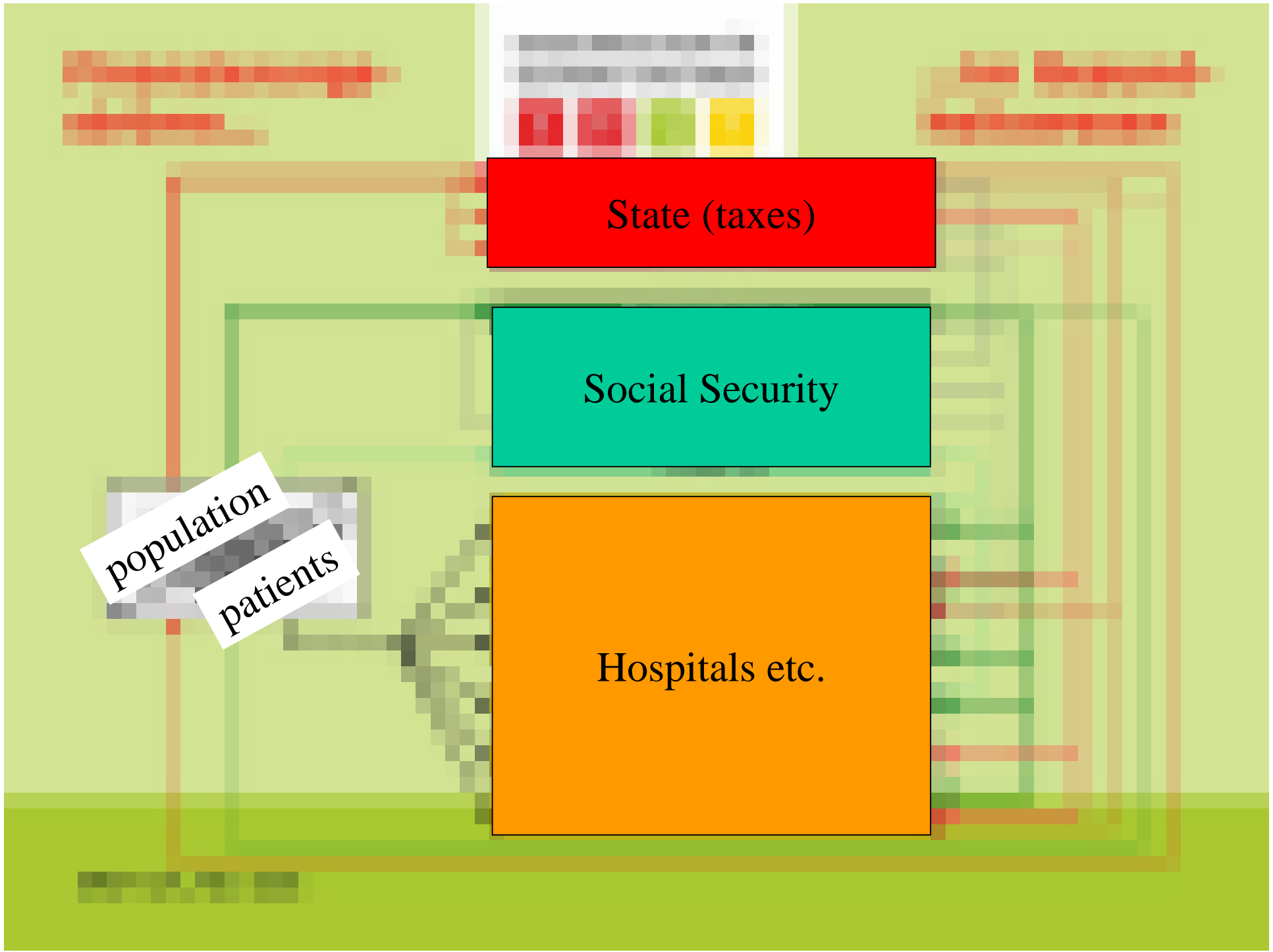
population

patients

State (taxes)

Social Security

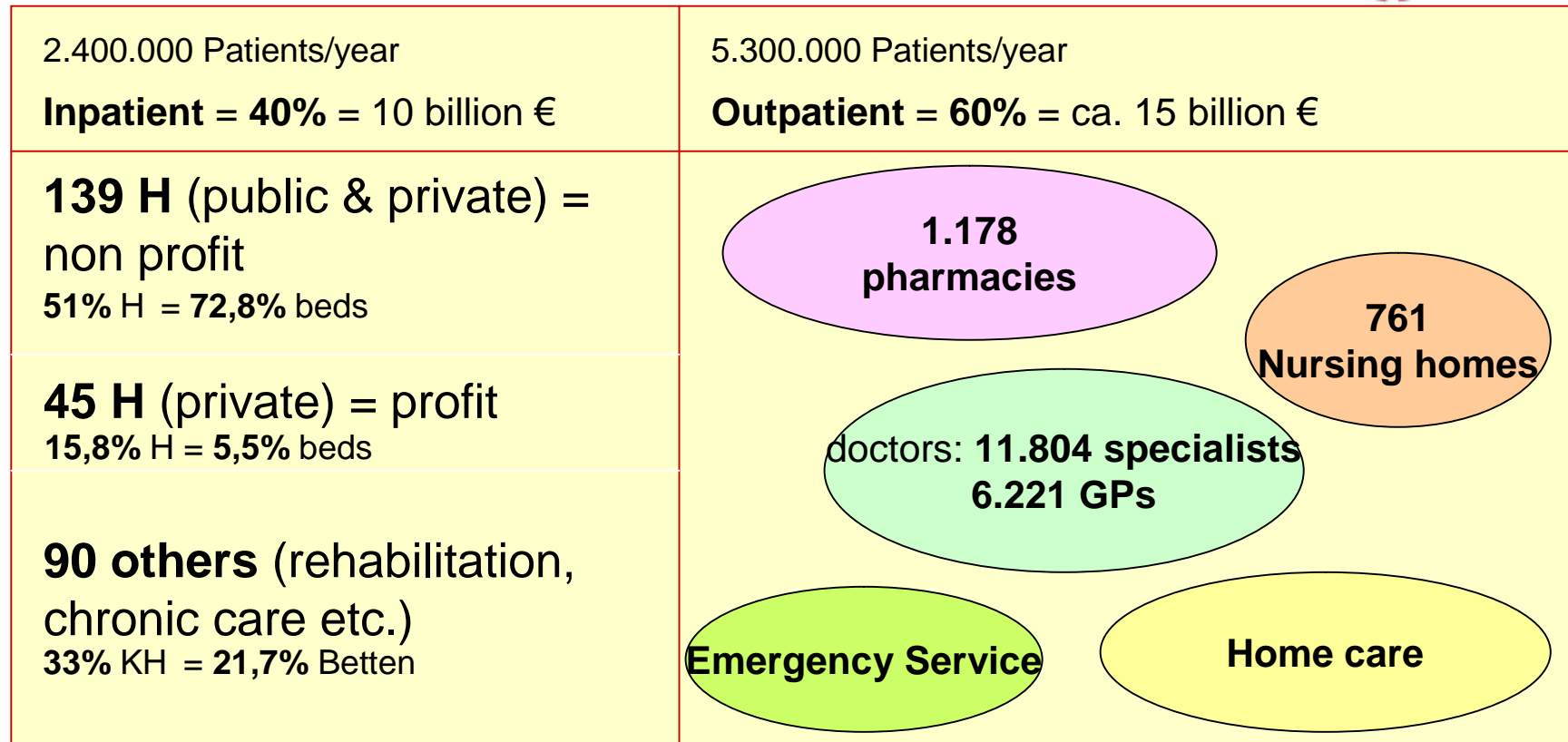
Hospitals etc.



One Page: Health System in Austria



costs: ca. **25.000.000.000 €** = 10,2% of GNP (gross national product)



Financing: 59% social security, 18% taxes, 23% private

LKF (DRG)

8,3 Mill. inhabitants, 9 Bundesländer, 22 health insurances



Evaluation of the treatment costs after balloon kyphoplasty versus conservative treatment in osteoporotic vertebral fractures – an economical analysis

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Costs Kyphoplasty



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Conservative tx:



◆ F: 12.739 €, M: 8923 €

(Lippuner K, von Overbeck J, Perrelet R, Bosshard H, Jaeger P. Incidence and direct medical costs of hospitalizations due to osteoporotic fractures in Switzerland. *Osteoporos Int.* 1997;7(5):414-25)



◆ 12.544 €

(Borgstrom F, Zethraeus N, Johnell O, Lidgren L, Ponzer S, Svensson O, Abdon P, Ornstein E, Lunsjo K, Thorngren KG, Sernbo I, Rehnberg C, Jonsson B. Costs and quality of life associated with osteoporosis-related fractures in Sweden. *Osteoporos Int.* 2006;17(5):637-50)

Balloon Kyphoplasty: total costs 4.400 – 6.400 €



Method data acquisition

Retrospective comparison: 1.1.2002 – 31.12.2005

- ◆ Admission diagnosis: osteoporotic vertebral fracture
- ◆ Patients have been assigned to
 - ◆ Kyphoplasty (N=140)
 - ◆ Non-surgical intervention (N=111)
- ◆ according to clinical criteria
- ◆ No randomization
- ◆ Selection of the best treatment?



Method data analysis

1.1.2002 – 31.12.2006

- ◆ Identification by name, data of birth, gender and ZIP code
- ◆ Tracking of 100% of patients in all Austrian hospitals
- ◆ Admission diagnosis: back pain, vertebral fracture, spinal disorders
- ◆ Length of stay and costs
- ◆ Matching against the Austria death registry

Results

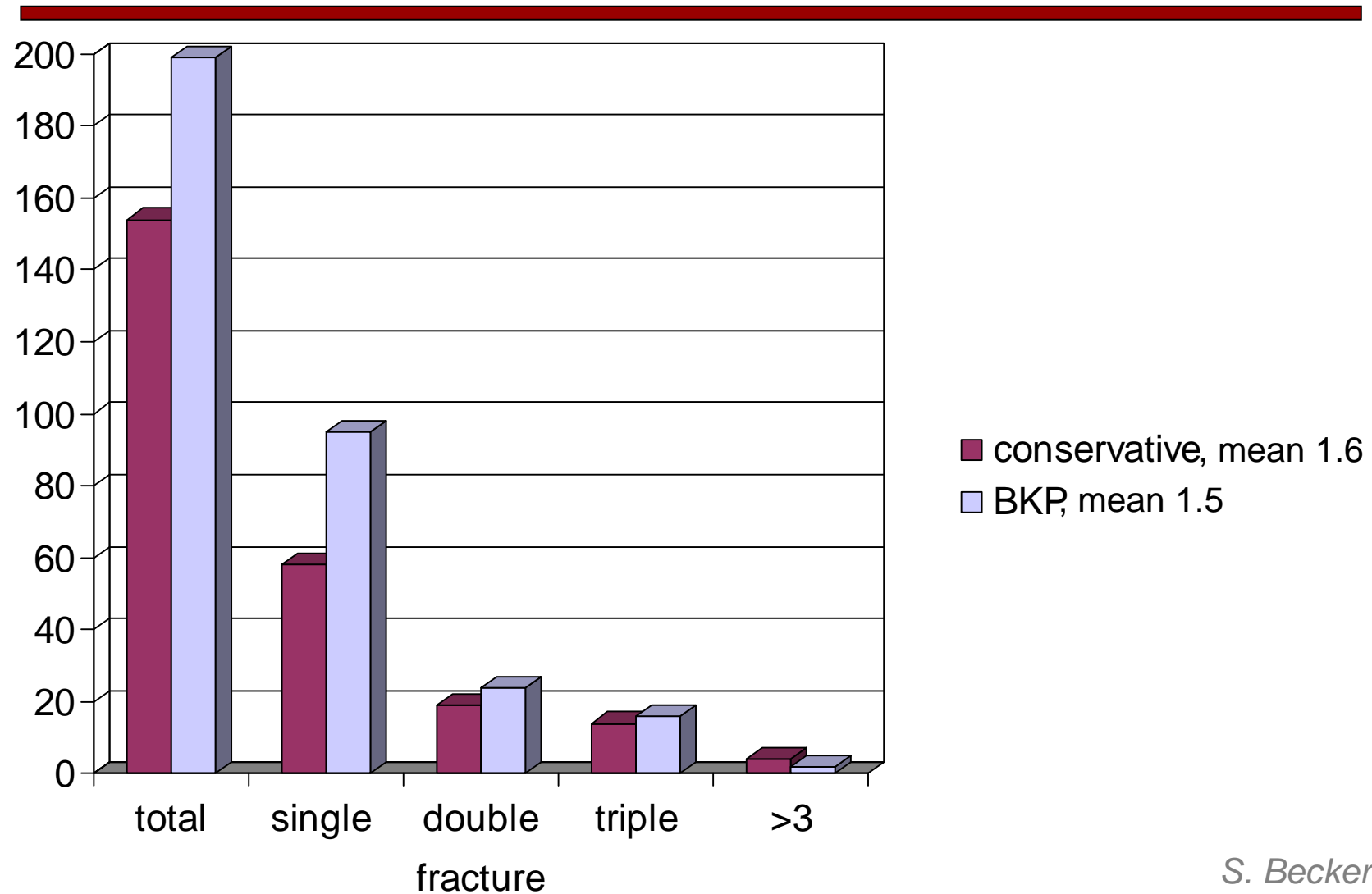


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	conservative	BKP
n	111	140
Age	75,5	71,2
Gender	13,5% ♂	30,7% ♂
Total follow-up time	324,5 a	354,25 a
Mean Follow-up/Patient	2,92 ± 1,4 a	2,53 ± 0,96 a

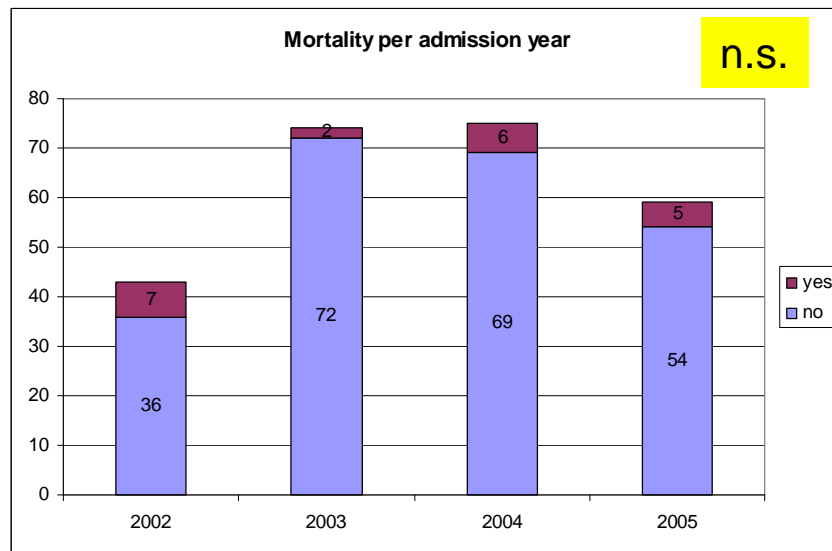


Fractures per group

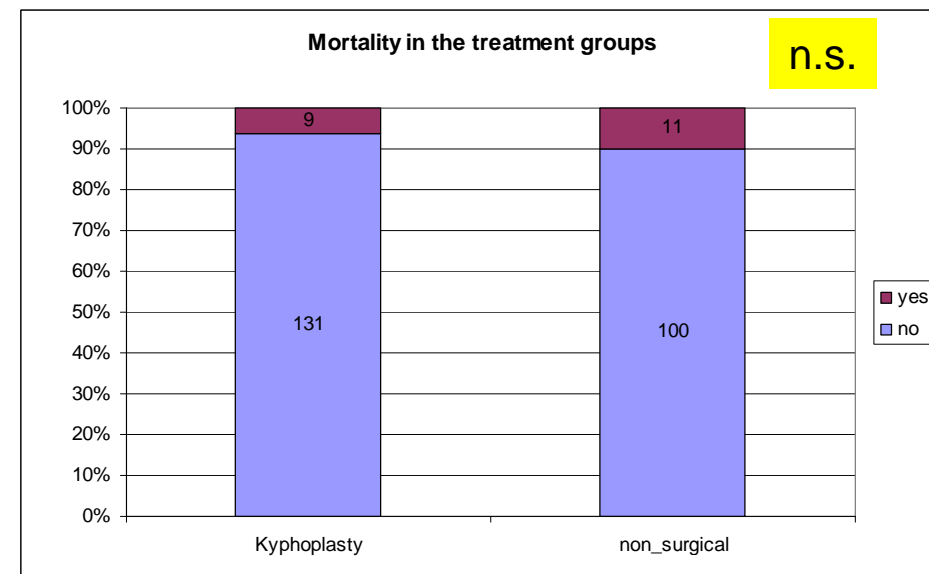




Mortality between 2002 and 2006



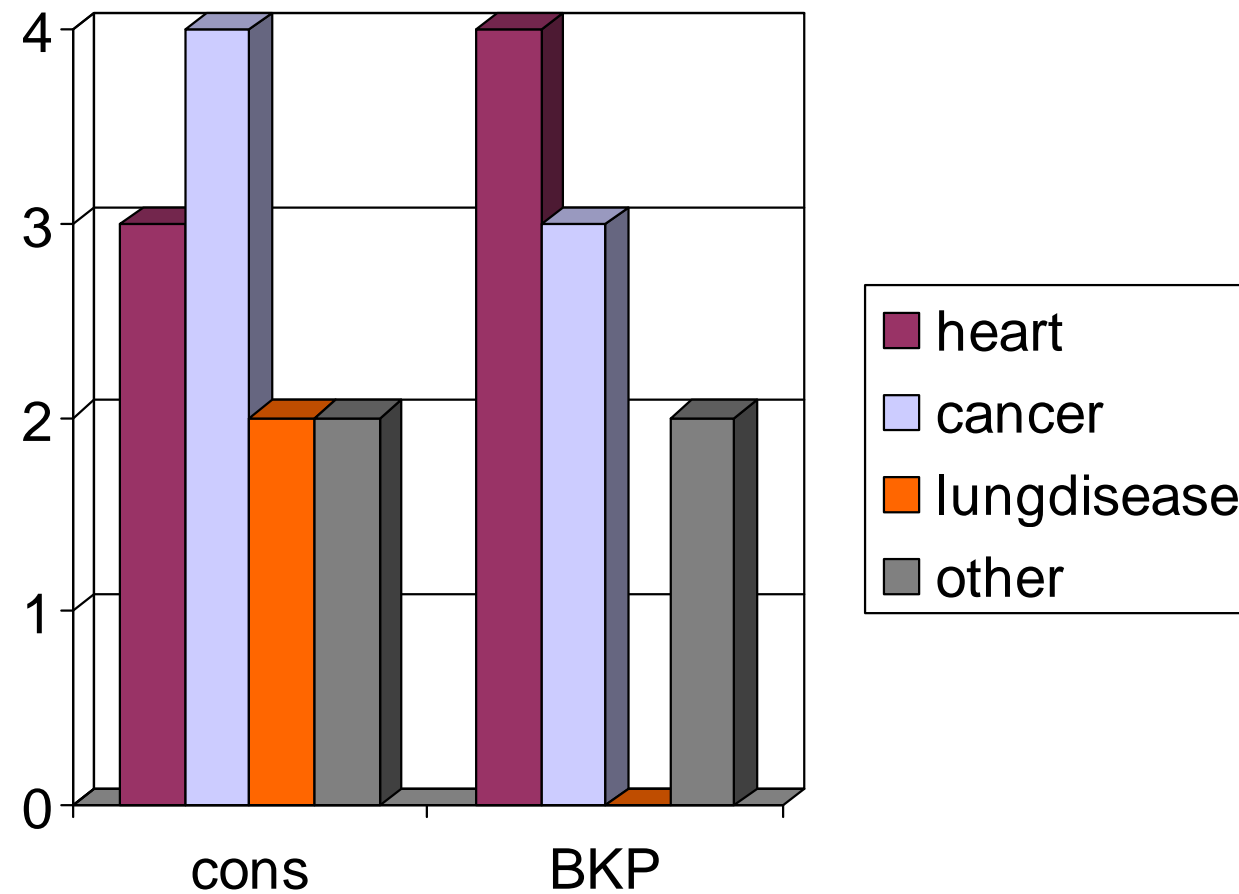
- ◆ conservative tx: 9.9%
- ◆ BKP 6.4%



Cause of death



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n both groups = 20



Results admissions

	conservative	BKP
Total admissions	195	109
Ø N° of admissions	1.8	0.8
Ø Admissions per year	0.6	0.3
Admissions per observation year per patient	0,9 <i>p= 0,004</i>	0,4

➤ Less spine relevant admissions per observation year for ballon kyphoplasty (51.2%)



Results length of stay

	conservative	BKP
Total length of stay (days)	1485	1287
Ø Average length of stay (days)	13.4	9.2
Ø Stay per year (days)	4.6	3.6
Stay (days) per observation year per patient	3,34 $p= 0,004$	0,6

➤ 79.4% shorter stay after BKP

Results DRG codes



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	conservative	BKP
Total DRG points	424.445	440.381
Ø DRG points per patient	3824	3146
Ø DRG points per year	1308	1243
DRG points per observation year per patient	853 $p= 0,05$	114

➤ 95.1% less DRG-scores per observation year for BKP

Results costs



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	conservative	BKP
Treatment costs per observation year per patient	853 DRG points 682 €	114 DRG points 91 €
add: Stay (days) per observation year per patient	4.6 3,34 days 400 €	3.6 0,6 days 72 €
total per year per patient costs	1082 €	163 €

$\Delta = 919 \text{ €}$

Conclusion economic study
average three years, max. five years



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-
- ◆ Both treatments have inpatient follow-up costs
 - ◆ Follow-up hospital treatment after BKP versus conservative treatment is:
 - cheaper
 - shorter
 - less frequently
 - Additional outpatient analysis under way
 - Further analysis in spine treatment and care under way

Thank you very much!



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