avicenne
MEDICAL

INFORMATION FOR GROWTH

www.avicenne.com

TUTORIAL - Orthopaedics Market

June 2016

CONTACT

Ali MADANI

Phone: + 33 1 47 78 46 00

a.madani@avicenne.com

avicenne
MEDICAL
INFORMATION FOR GROWTH
www.avicenne.com

Table of contents

To download the presentations:

http://www.implants-event.com/program/presentations-2016/

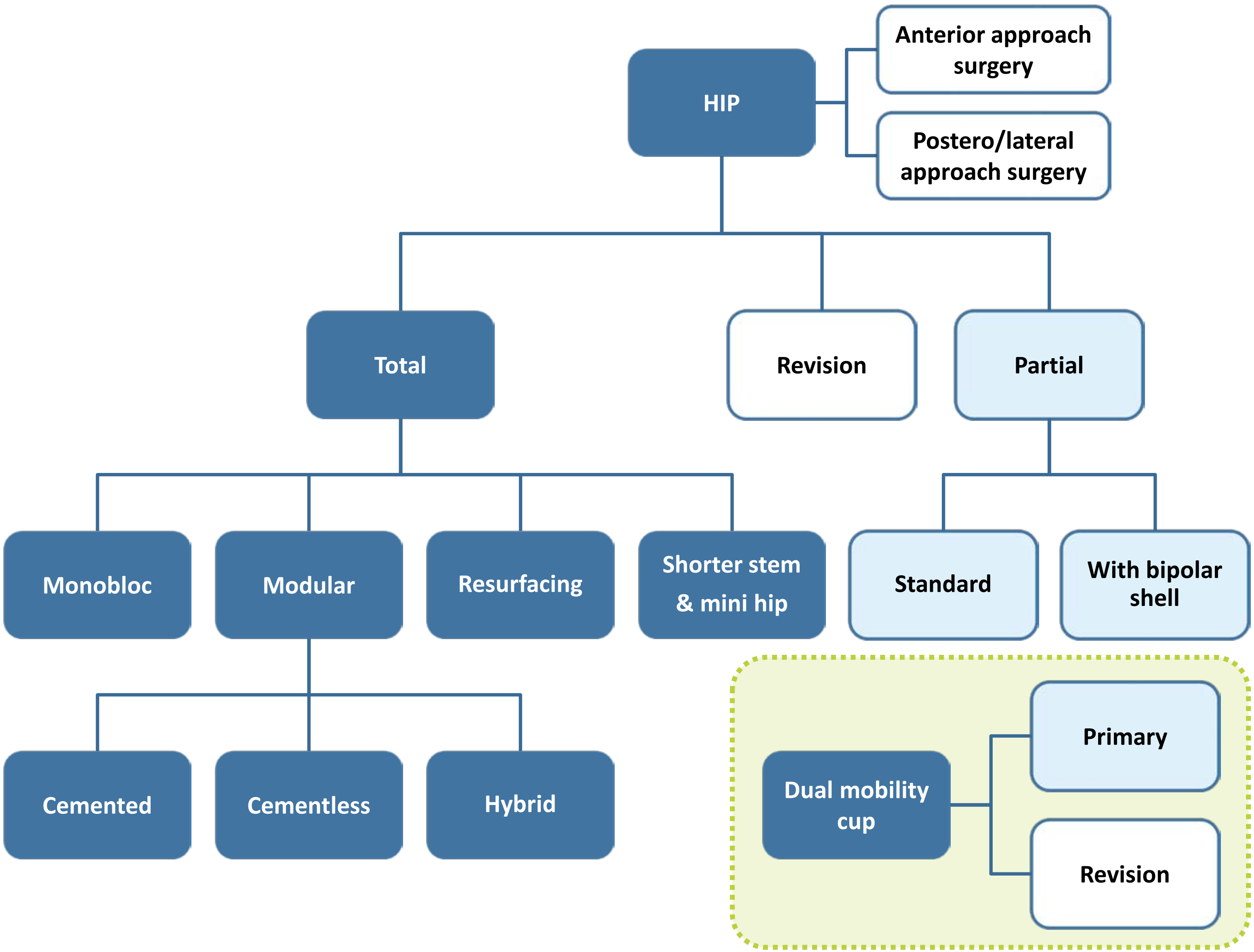
Password: biarritz_2016

TUTORIAL
Orthopaedics Market
June 2016

CONTACT

Ali MADANI
Phone: + 33 1 47 78 46 00
a.madani@avicenne.com

Hip segmentation



TUTORIAL
Orthopaedics Market
June 2016

CONTACT
Ali MADANI
Phone: + 33 1 47 78 46 00
a.madani@avicenne.com

avicenne MEDICAL
INFORMATION FOR GROWTH
www.avicenne.com

Hip segmentation by fixations & bearings

Fixations

- **Total Hip**
  - **Cemented** (Stem & cup are cemented)
  - **Cementless** (Stem & cup are cementless)
  - **Hybrid** (Stem is cemented, cup is cementless)

Bearings

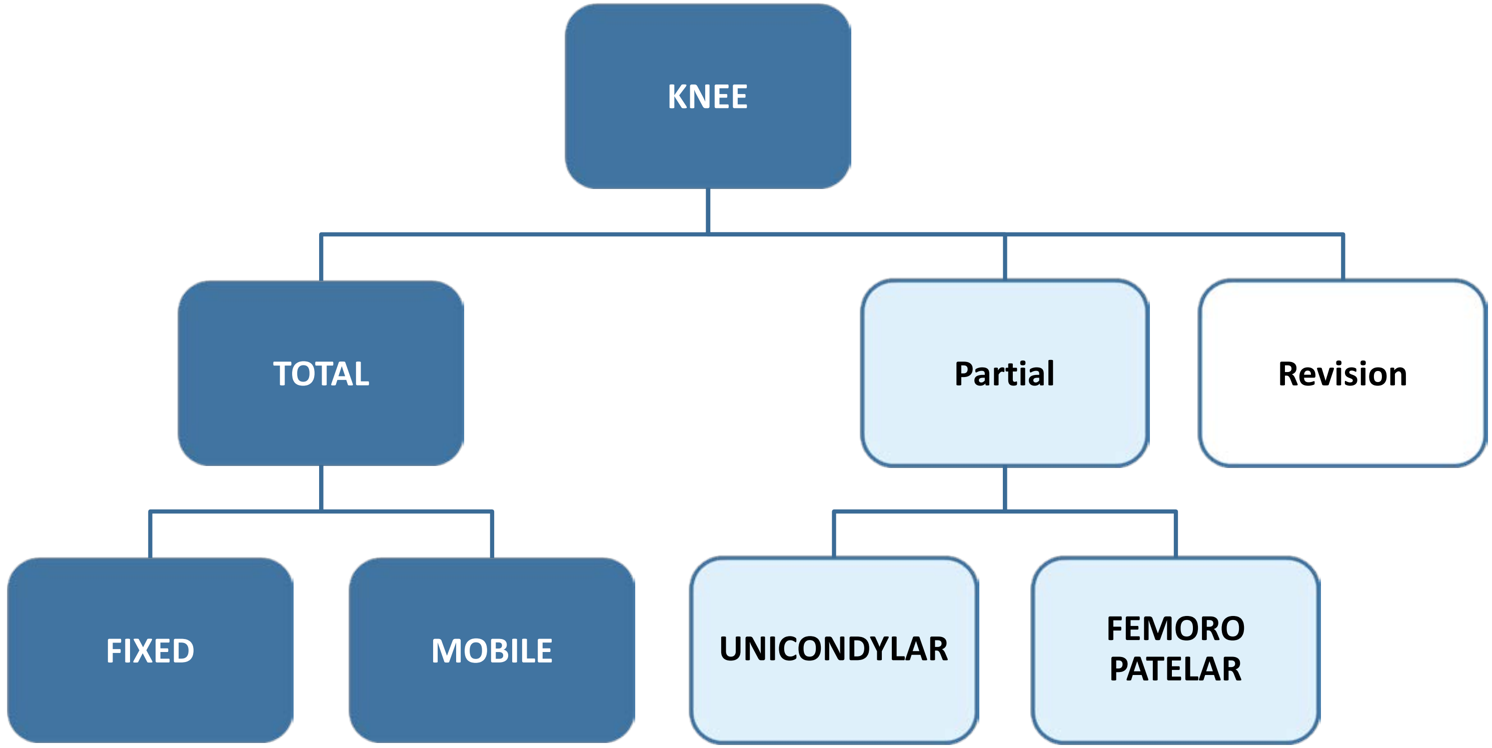
- **Cemented**
  - Metal / Polyethylene
  - Ceramic / Polyethylene
- **Cementless**
  - Metal / Polyethylene
  - Ceramic / Polyethylene
  - Ceramic / Ceramic
  - Metal / Metal
- **Hybrid**
  - Metal / Polyethylene
  - Ceramic / Polyethylene
  - Ceramic / Ceramic
  - Metal / Metal

TUTORIAL
Orthopaedics Market
June 2016

CONTACT

Ali MADANI
Phone: + 33 1 47 78 46 00
a.madani@avicenne.com

Knee segmentation



avicenne MEDICAL
INFORMATION FOR GROWTH
www.avicenne.com

TUTORIAL
Orthopaedics Market
June 2016

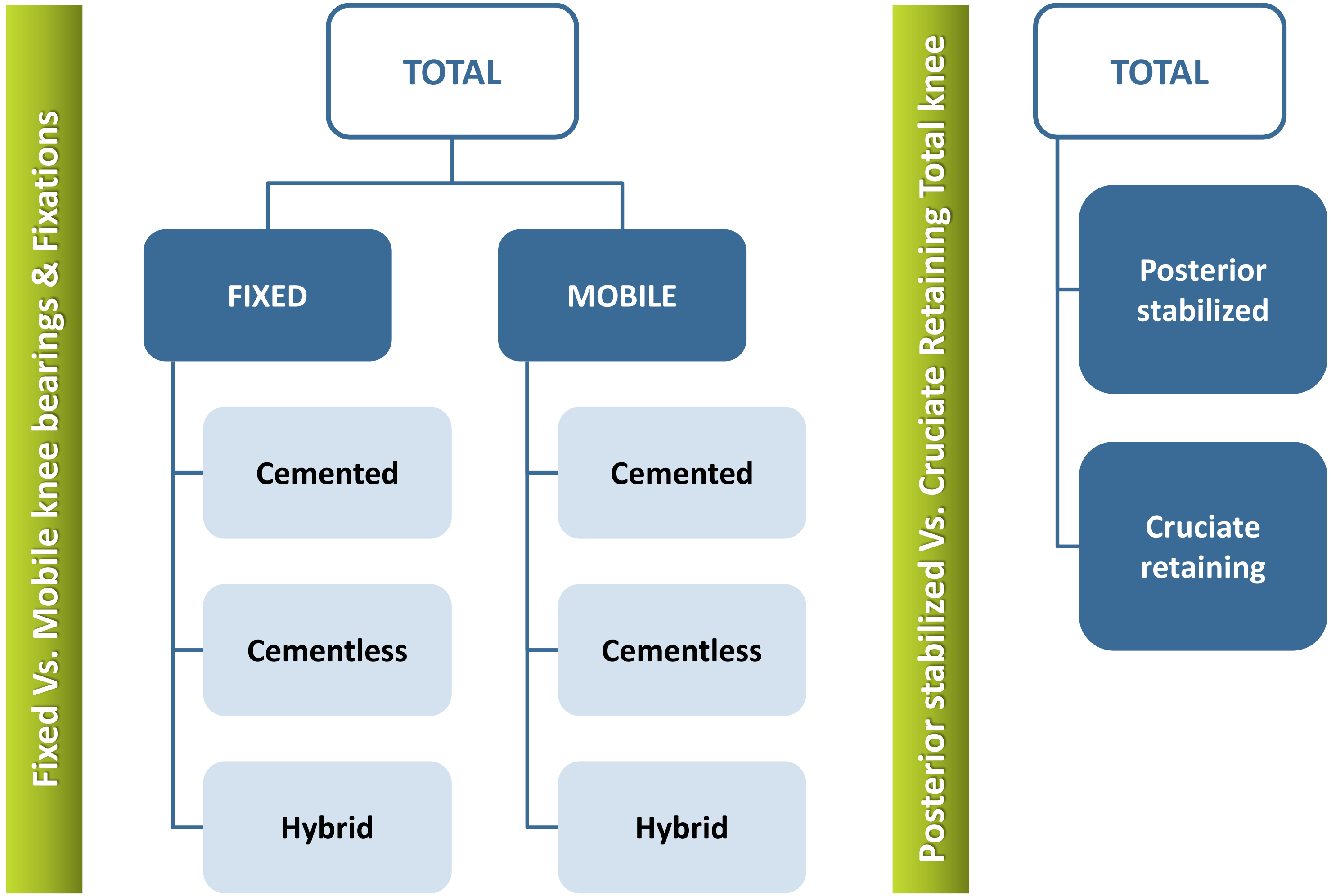
CONTACT

Ali MADANI
Phone: + 33 1 47 78 46 00
a.madani@avicenne.com

TUTORIAL
Orthopaedics Market
June 2016

Knee segmentation:

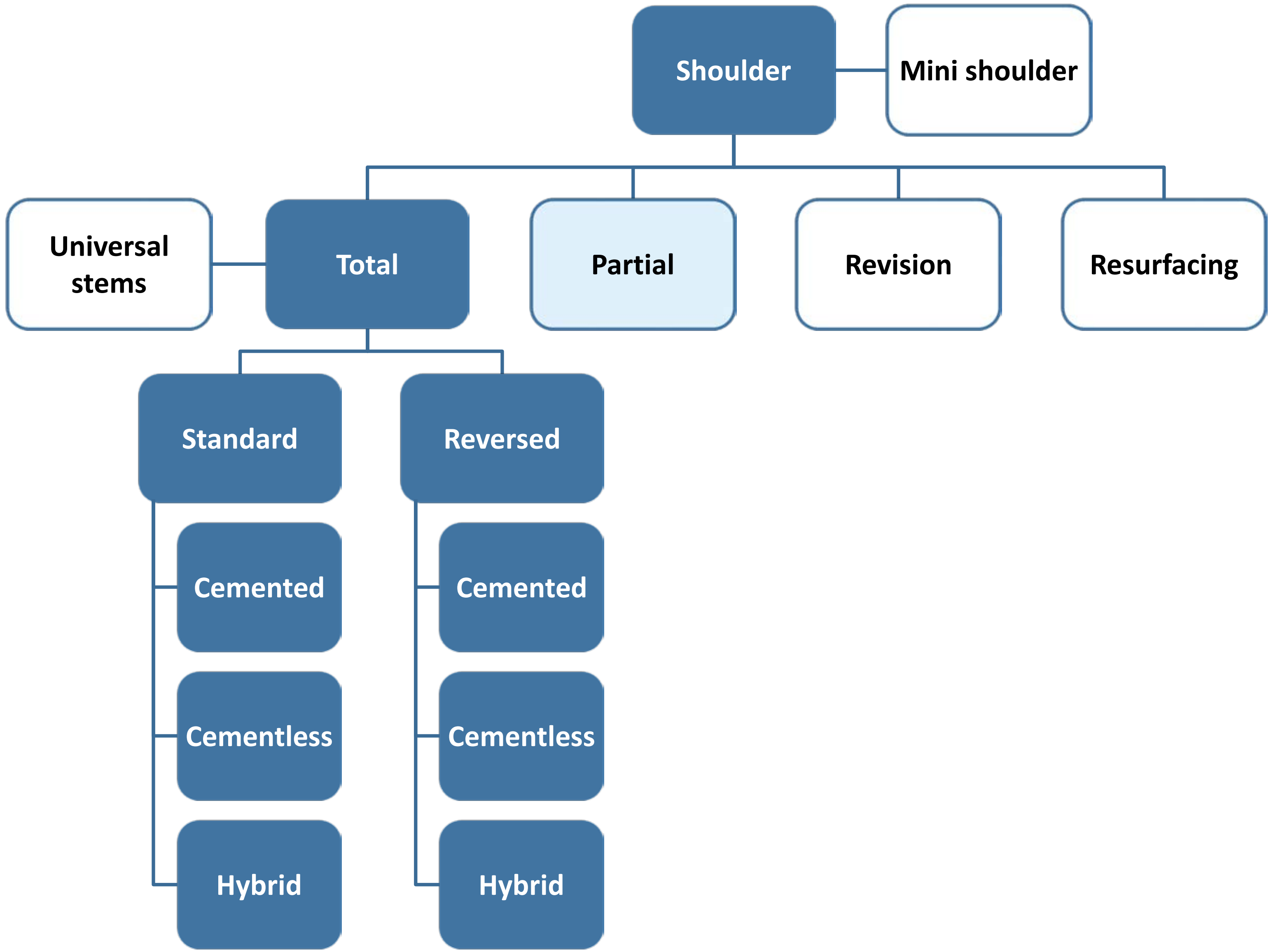
Fixed Vs. Mobile knee bearings, Fixations, Posterior stabilized Vs. Cruciate Retaining Total knees



CONTACT
Ali MADANI
Phone: + 33 1 47 78 46 00
a.madani@avicenne.com

avicenne MEDICAL
INFORMATION FOR GROWTH
www.avicenne.com

Shoulder segmentation



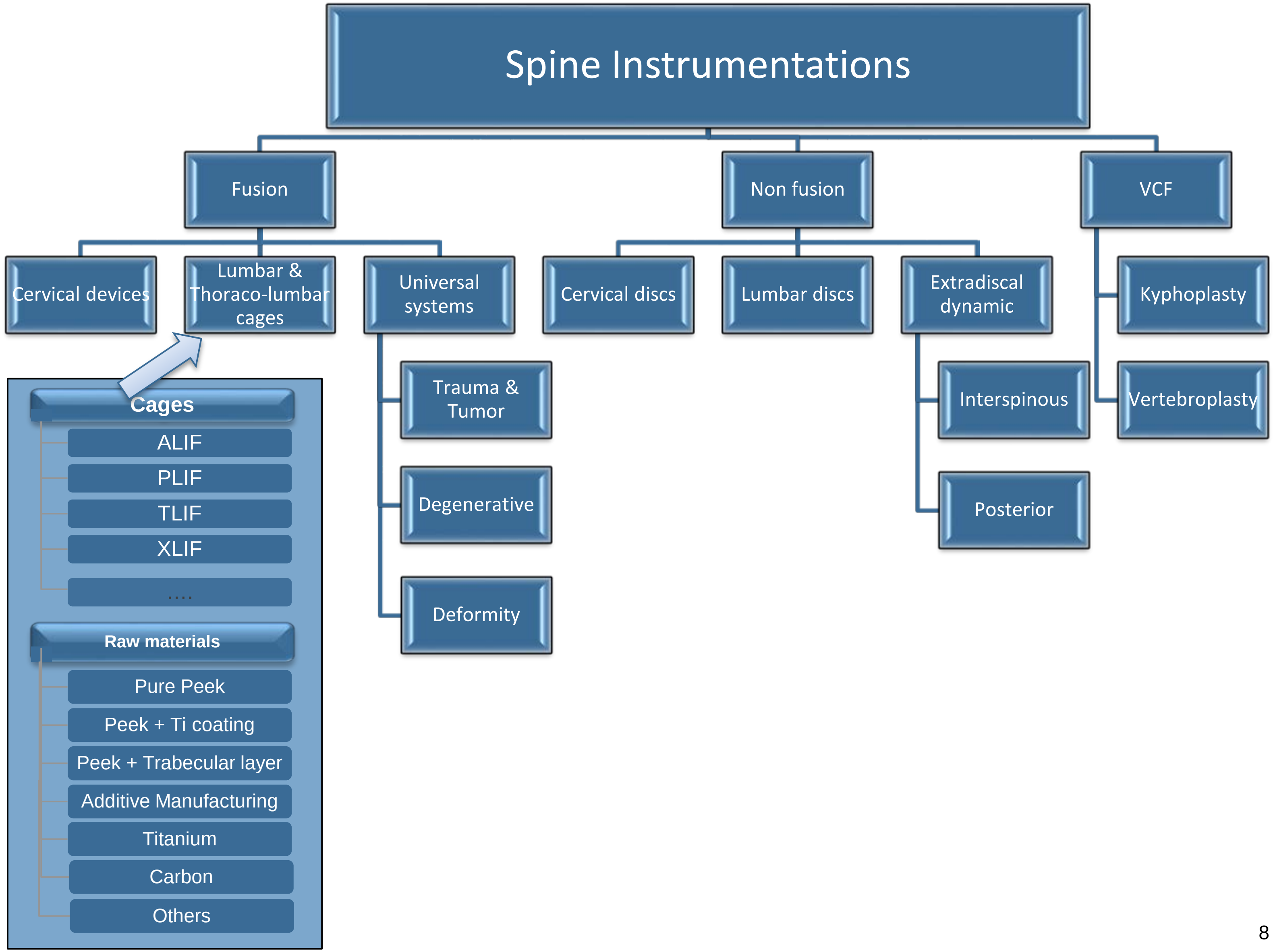
TUTORIAL
Orthopaedics Market
June 2016

CONTACT

Ali MADANI
Phone: + 33 1 47 78 46 00
a.madani@avicenne.com

avicenne MEDICAL
INFORMATION FOR GROWTH
www.avicenne.com

Spine segmentation



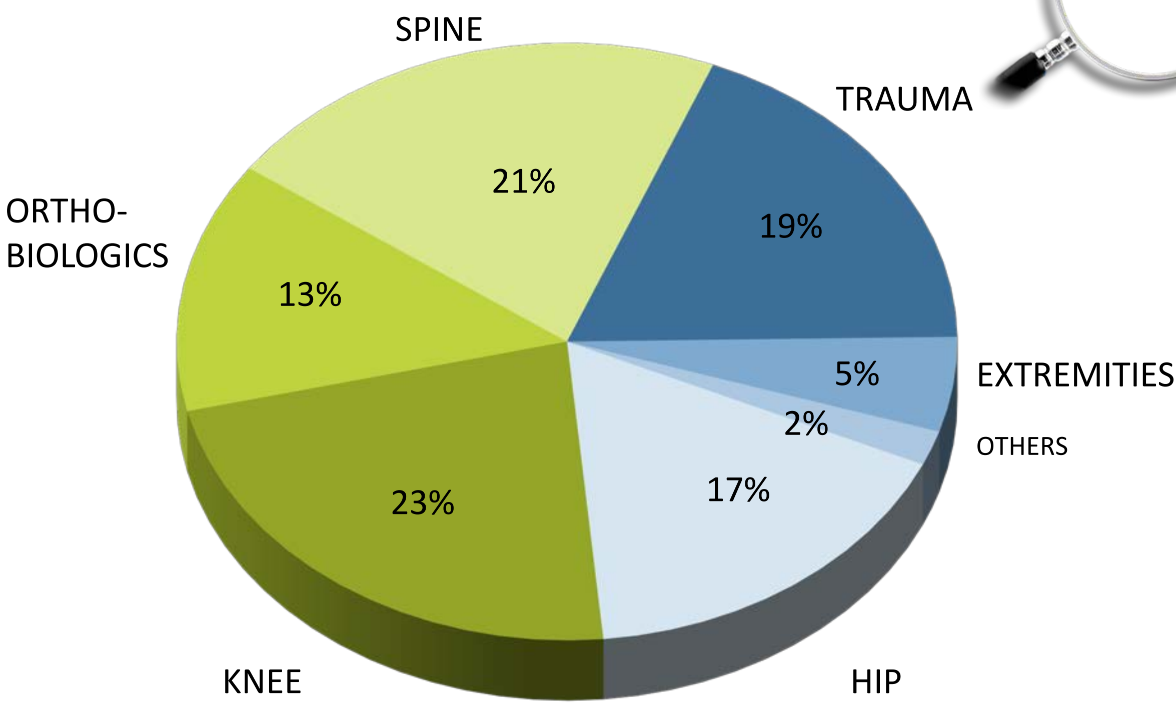
TUTORIAL
Orthopaedics Market
June 2016

CONTACT

Ali MADANI
Phone: + 33 1 47 78 46 00
a.madani@avicenne.com

avicenne MEDICAL
INFORMATION FOR GROWTH
www.avicenne.com

Worldwide orthopaedic* markets in 2015: ~39 BUS$ (+4.3%)



KNEE
8.9 B$
+4.5%

Hip
6.5 B$
+2.1%

SPINE
8.3 B$
+2.9%

Source: Avicenne research & analysis 2016

- * Not included : Power tools, Arthroscopy & soft tissue repair, sport Medicine, Neuro-stimulation

- Extremities: Shoulder, Elbow, Ankle, Foot, hand,… (excluding trauma)
- Orthobiologics: Allograft, Xenograft, Synthetic Bone, Cement, BMP, others, Cell based Product, Auto repair product, Anti Adhesion product, Hyaluronic Acid,…
- Other: Navigation, ortho. Equipment, etc..

TUTORIAL
Orthopaedics Market
June 2016

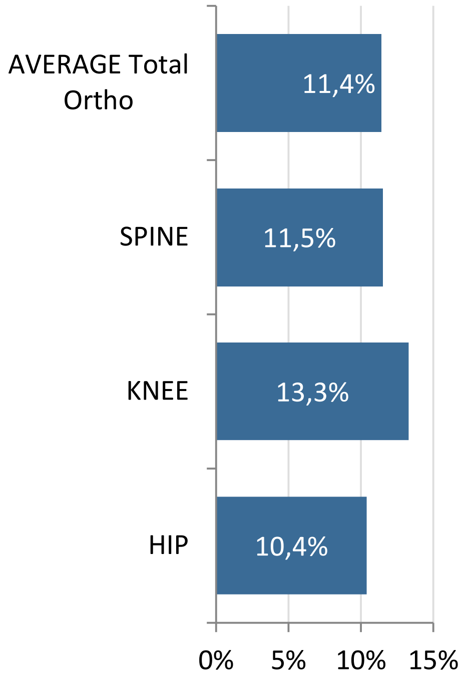
CONTACT

Ali MADANI
Phone: + 33 1 47 78 46 00
a.madani@avicenne.com

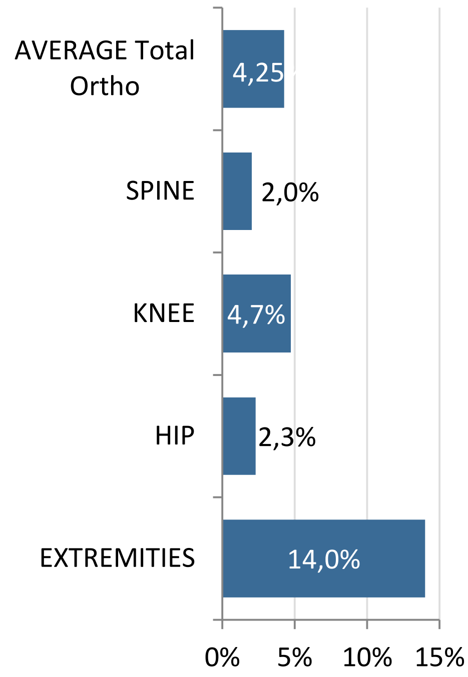
avicenne MEDICAL
INFORMATION FOR GROWTH
www.avicenne.com

The Worldwide orthopaedics market: Growth

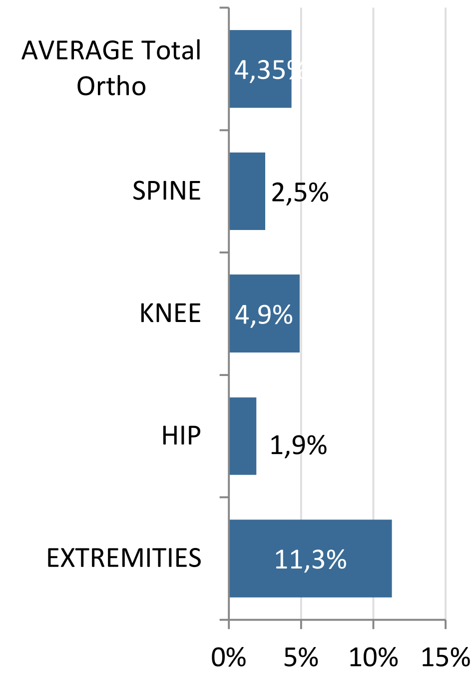
2000 - 2010 CAGR



2010 - 2012 CAGR



2012 - 2015 CAGR



Source: Avicenne research & analysis 2016

TUTORIAL
Orthopaedics Market
June 2016

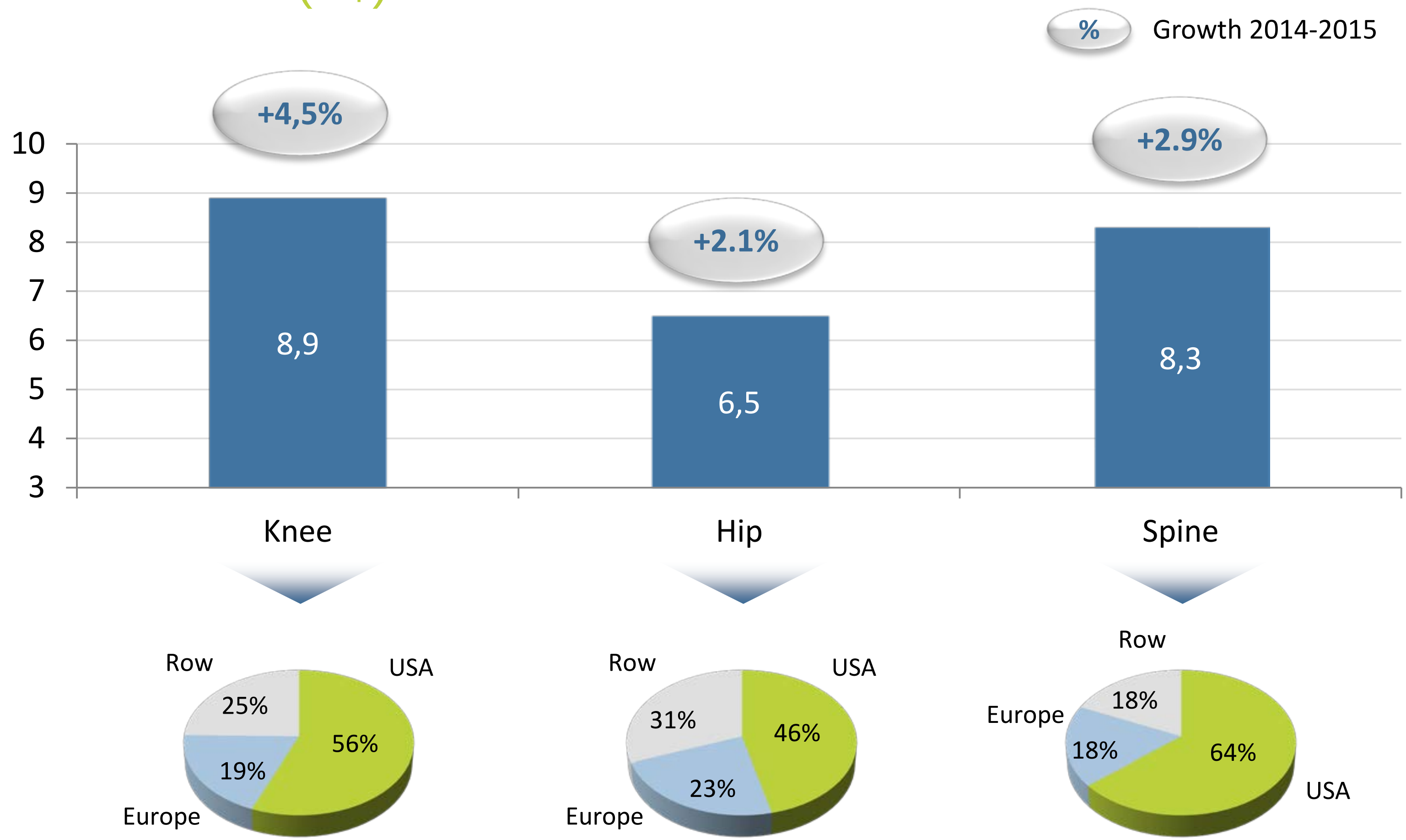
CONTACT

Ali MADANI
Phone: + 33 1 47 78 46 00
a.madani@avicenne.com

Worldwide implants market in 2015 in value (B$)

TUTORIAL
Orthopaedics Market
June 2016

Market value (B$)



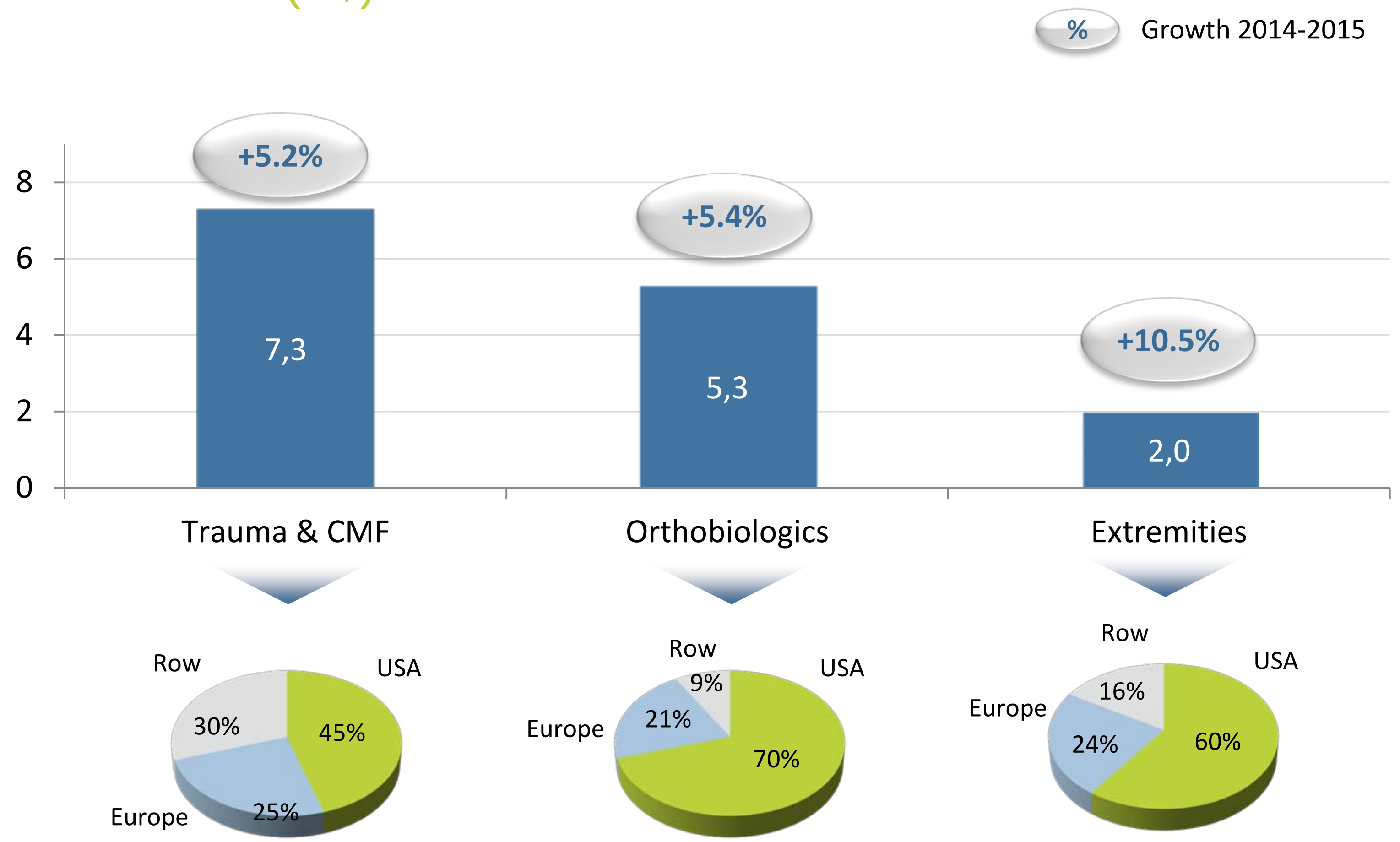
Source: Avicenne research & analysis 2016

CONTACT
Ali MADANI
Phone: + 33 1 47 78 46 00
a.madani@avicenne.com

avicenne MEDICAL
INFORMATION FOR GROWTH
www.avicenne.com

Worldwide implants & Orthobiologics market in 2015 in value (B$)

Market value (B$)



Source: Avicenne research & analysis 2016

TUTORIAL
Orthopaedics Market
June 2016

CONTACT

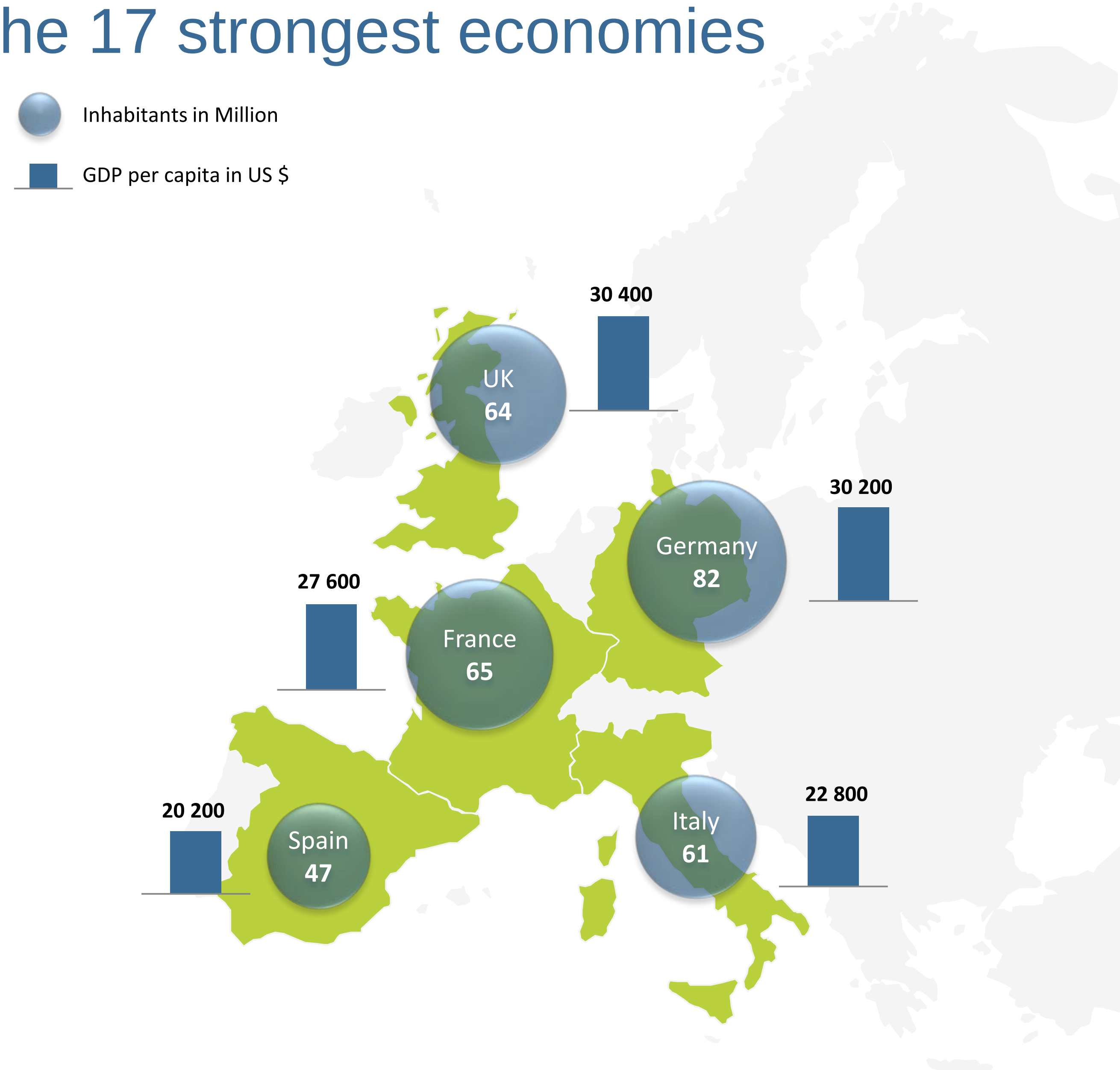
Ali MADANI
Phone: + 33 1 47 78 46 00
a.madani@avicenne.com

Europe

TUTORIAL
Orthopaedics Market
June 2016

CONTACT
Ali MADANI
Phone: + 33 1 47 78 46 00
a.madani@avicenne.com

The countries taken into account in Europe are the 17 strongest economies



avicenne MEDICAL
INFORMATION FOR GROWTH
www.avicenne.com

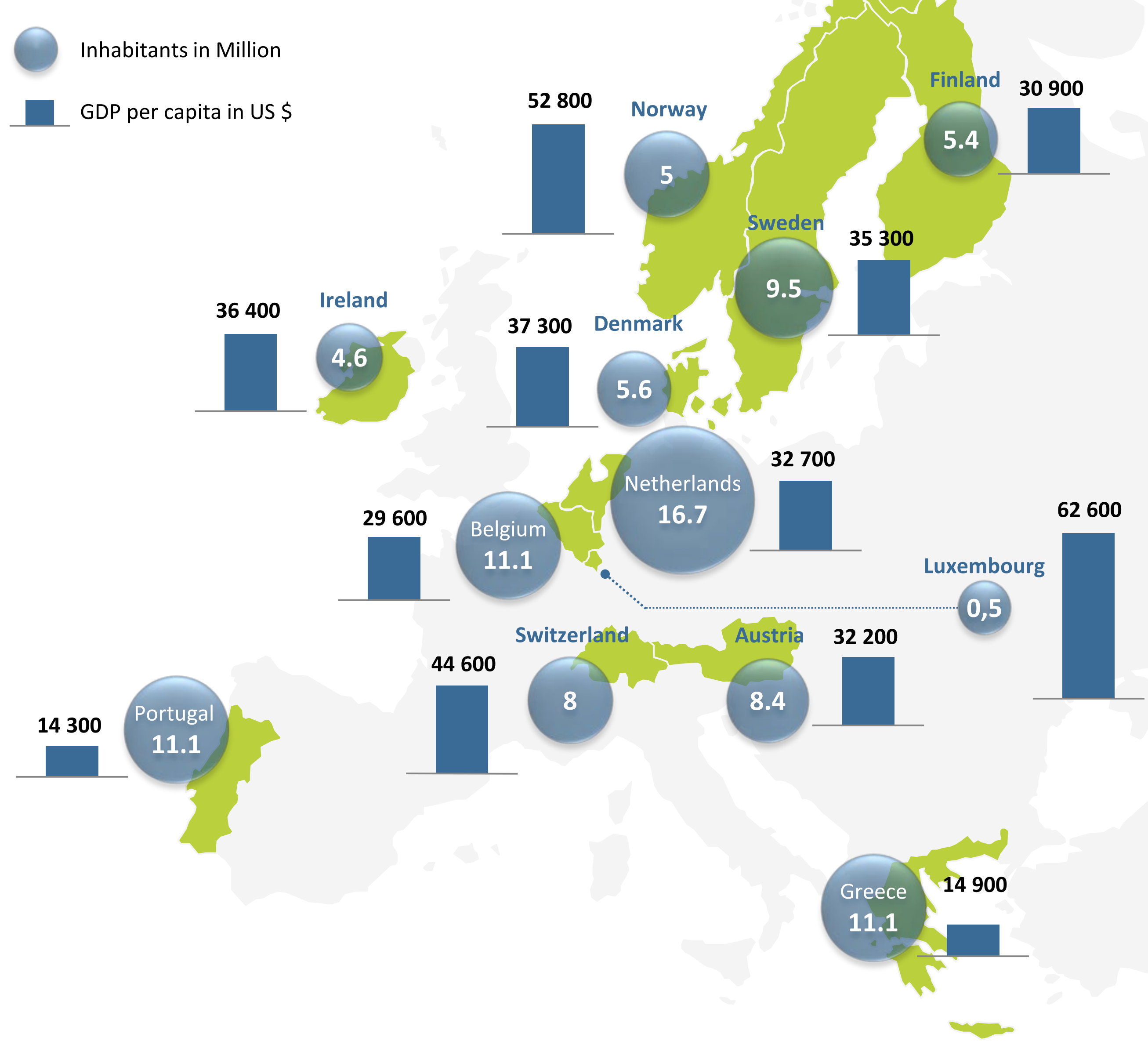
Europe

TUTORIAL
Orthopaedics Market
June 2016

CONTACT

Ali MADANI
Phone: + 33 1 47 78 46 00
a.madani@avicenne.com

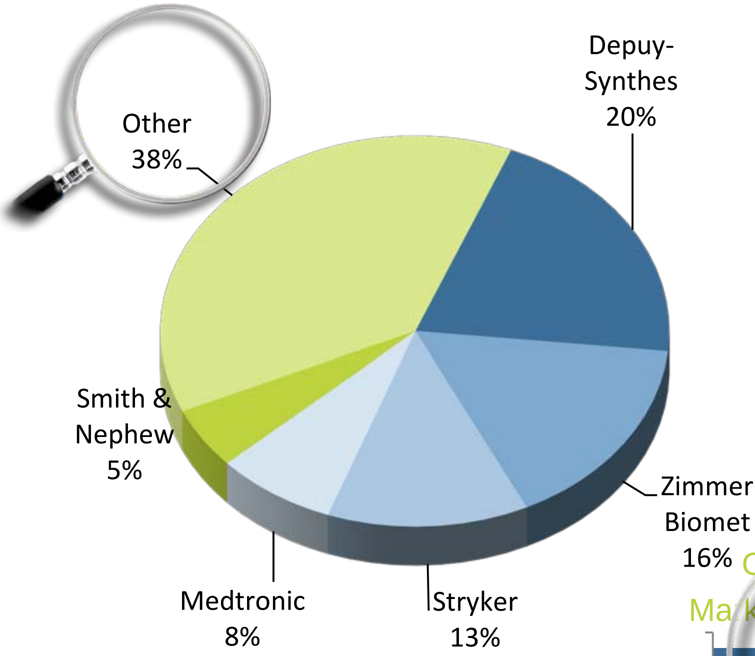
The countries taken into account in Europe are the 17 strongest economies

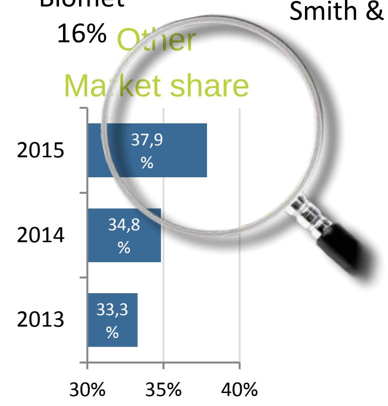


avicenne MEDICAL
INFORMATION FOR GROWTH
www.avicenne.com

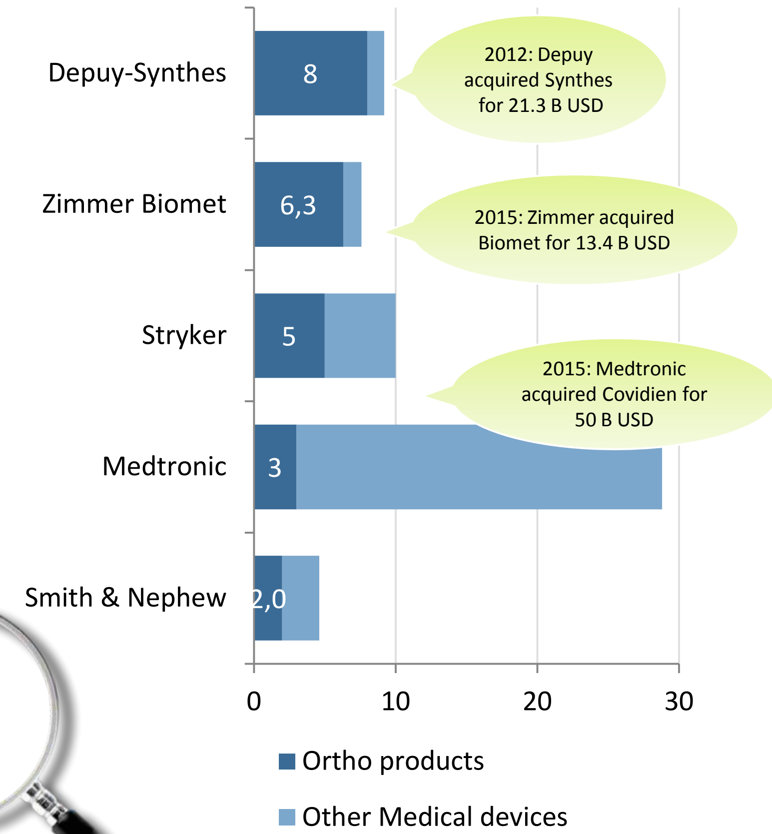
Worldwide orthopaedic market in 2015: competition

2015 Worldwide Orthopaedic Market





2015 revenues of the Major Orthopaedic Companies (B$)



Source: Avicenne research & analysis 2016

TUTORIAL
Orthopaedics Market
June 2016

CONTACT
Ali MADANI
Phone: + 33 1 47 78 46 00
a.madani@avicenne.com

avicenne MEDICAL
INFORMATION FOR GROWTH
www.avicenne.com

Worldwide competition by product in 2015: Market share

Worldwide	DePuy Synthes	stryker	ZIMMER BIOMET	Medtronic	smith&nephew	Others	
Hip Top 5: 75%	20%	19%	30%	0%	9%	21%	=100%
Knee Top 5: 84%	17%	16%	32%	0%	10%	25%	=100%
Spine Top 5: 71%	22%	9%	5%	30%	0%	35%	=100%
Trauma & CMF Top 5: 67%	35%	13%	8%	0%	7%	38%	=100%
Total Ortho Top 6: 65%	21%	13%	16%	8%	5%	35%	=100%

Source: Avicenne research & analysis 2016

TUTORIAL
Orthopaedics Market
June 2016

CONTACT
Ali MADANI
Phone: + 33 1 47 78 46 00
a.madani@avicenne.com

avicenne MEDICAL
INFORMATION FOR GROWTH
www.avicenne.com

The challengers gained market share continuously

	2013 challengers	2014 challengers	2015 challengers
Hip	15%	17%	21%
Knee	19%	21%	25%
Spine	29%	30%	35%
Trauma & CMF	32%	33%	38%
Total Ortho	33%	35%	38%

Source: Avicenne research & analysis 2016

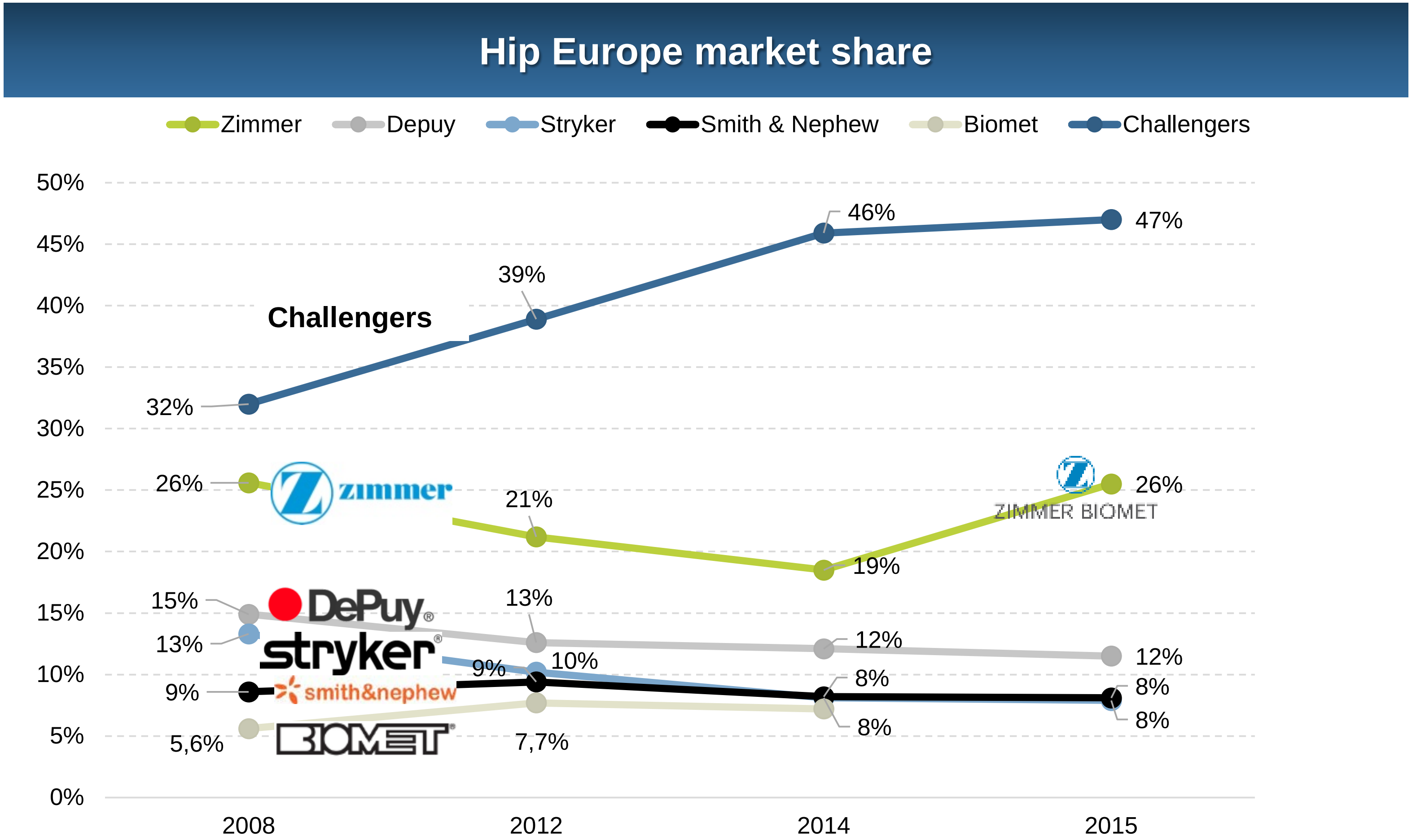
TUTORIAL
Orthopaedics Market
June 2016

CONTACT

Ali MADANI
Phone: + 33 1 47 78 46 00
a.madani@avicenne.com

avicenne MEDICAL
INFORMATION FOR GROWTH
www.avicenne.com

Hip Europe market share 2008-2015



TUTORIAL
Orthopaedics Market
June 2016

CONTACT

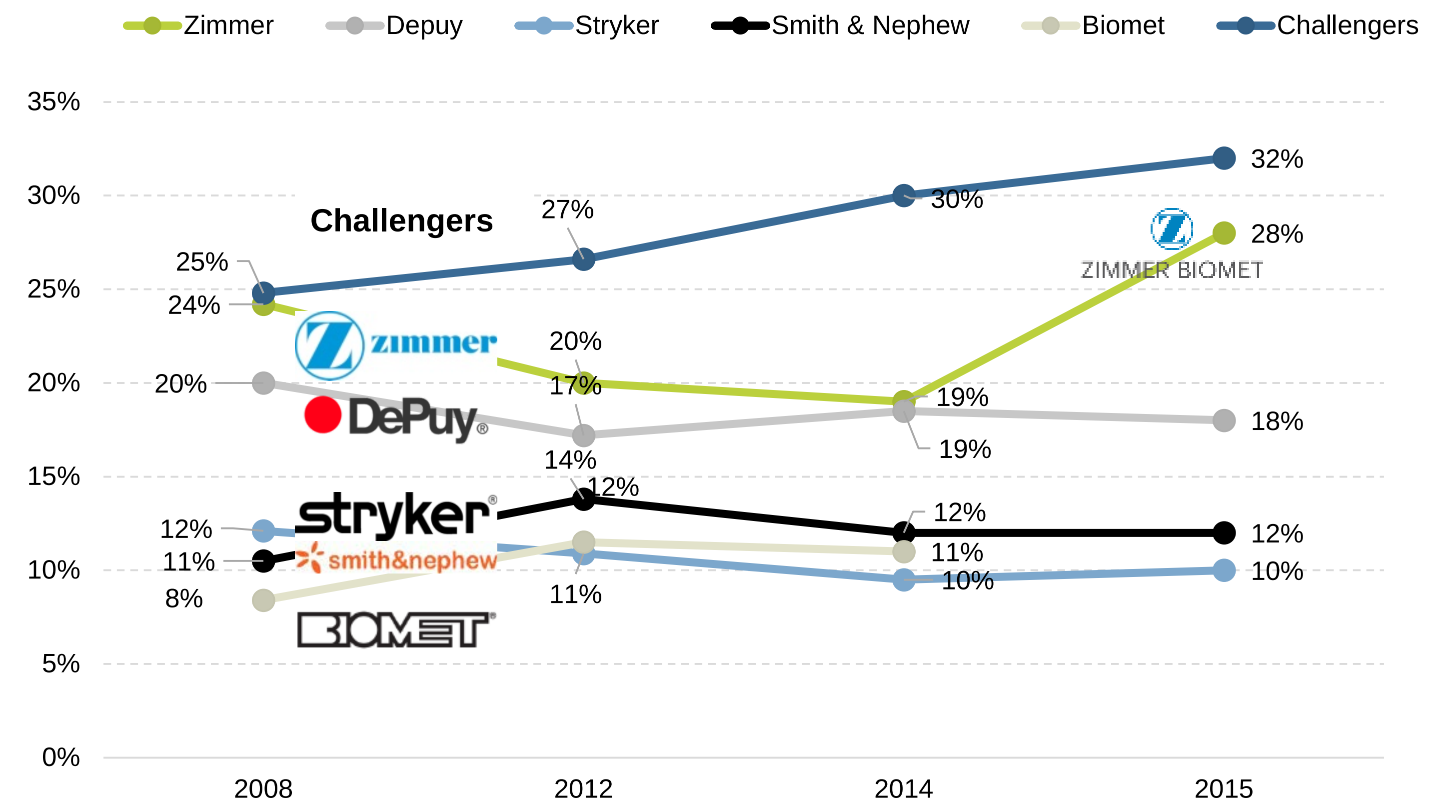
Ali MADANI
Phone: + 33 1 47 78 46 00
a.madani@avicenne.com

Source: Avicenne analysis 2016

avicenne MEDICAL
INFORMATION FOR GROWTH
www.avicenne.com

Knee Europe market share 2008-2015

Knee Europe market share



Source: Avicenne analysis 2016

TUTORIAL
Orthopaedics Market
June 2016

CONTACT
Ali MADANI
Phone: + 33 1 47 78 46 00
a.madani@avicenne.com

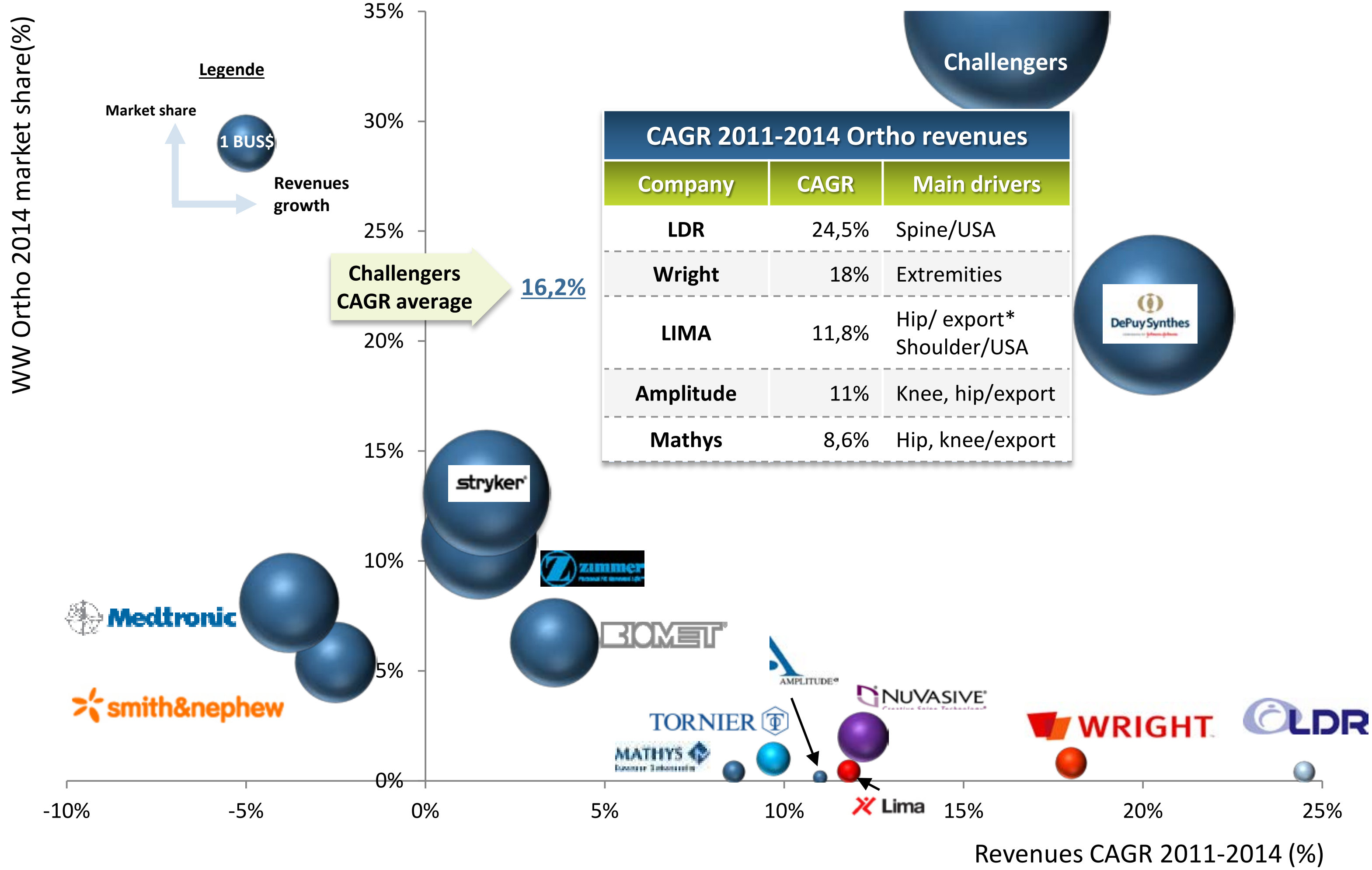
avicenne MEDICAL
INFORMATION FOR GROWTH
www.avicenne.com

Worldwide orthopaedic Contract Manufacturing market report 2015-2020 & Top 100 player profiles

CONTACT

Ali MADANI
Phone: + 33 1 47 78 46 00
a.madani@avicenne.com

Majors Vs Challengers: Majors saved their margins & Challengers got the growth!



CAGR 2011-2014 Ortho revenues

Company	CAGR	Main drivers
LDR	24,5%	Spine/USA
Wright	18%	Extremities
LIMA	11,8%	Hip/ export* Shoulder/USA
Amplitude	11%	Knee, hip/export
Mathys	8,6%	Hip, knee/export

* export: apart from their home country

Source: Avicenne , annual reports and companies June 2015

avicenne
MEDICAL
INFORMATION FOR GROWTH
www.avicenne.com

TUTORIAL
Orthopaedics Market
June 2016

CONTACT
Ali MADANI
Phone: + 33 1 47 78 46 00
a.madani@avicenne.com

Challengers growing Vs Majors

Majors	Challengers
Product standardization	Multiplication of customized
Product range reduction	Product range Extension
Sale channels cost cutting	Attracting new sale forces
More centralized services	Local and high level services
Focus on surgeons with high activity	Focus on all the surgeons

Source: Avicenne research & analysis 2016

avicenne MEDICAL
INFORMATION FOR GROWTH
www.avicenne.com

Market Drivers

Demographic & Economic	**Impact 1:** Population **Impact 2:** Inhabitants 65+ years **Impact 3:** Health expenses **Impact 4:** Obesity
New products & innovation and revision	**Impact 1:** Product mix impact

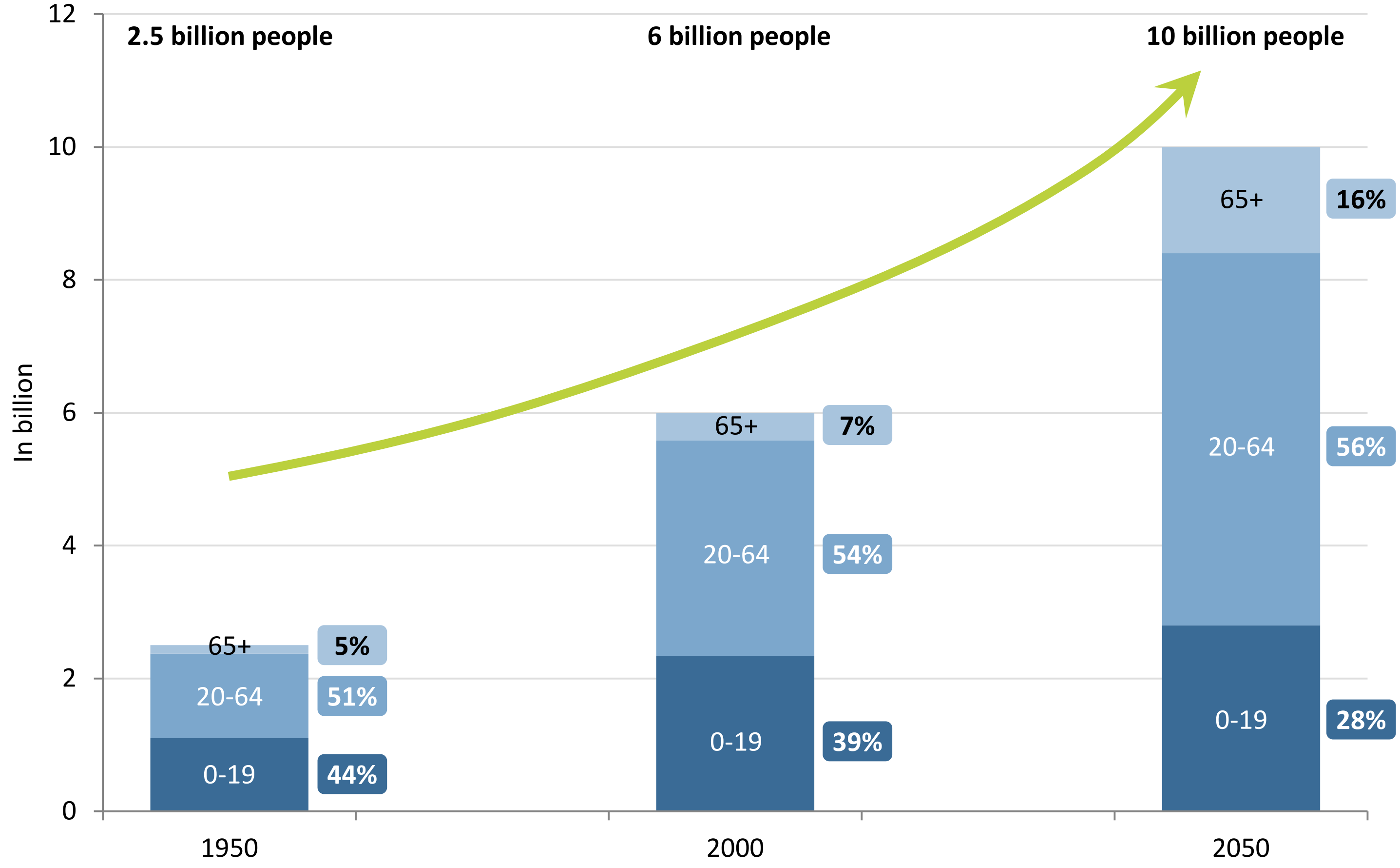
Source: Avicenne research & analysis 2016

TUTORIAL
Orthopaedics Market
June 2016

CONTACT

Ali MADANI
Phone: + 33 1 47 78 46 00
a.madani@avicenne.com

Global population growth 1950-2050 and people over 65



Source: United Nations – World Population Prospects, The 2012 Revision, Smith & Nephew annual report 2014

avicenne MEDICAL
INFORMATION FOR GROWTH
www.avicenne.com

TUTORIAL
Orthopaedics Market
June 2016

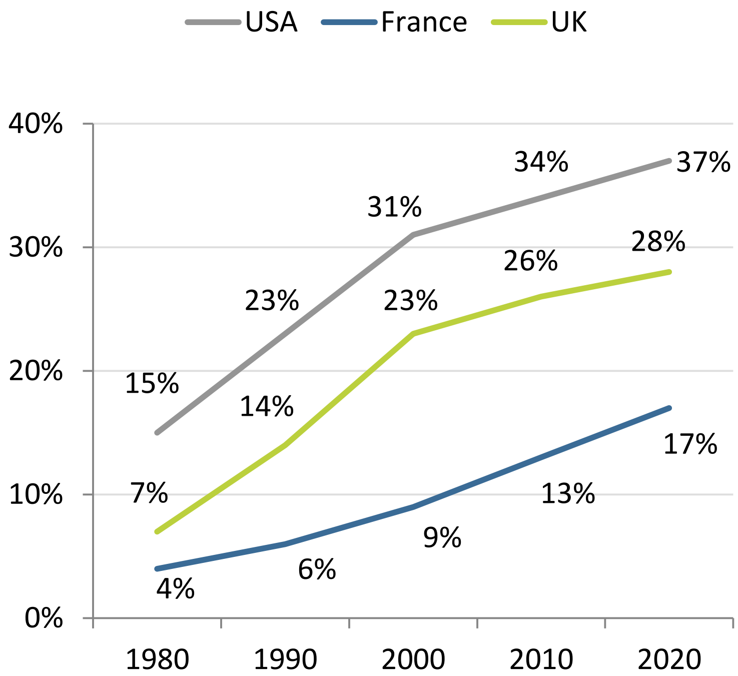
CONTACT

Ali MADANI
Phone: + 33 1 47 78 46 00
a.madani@avicenne.com

avicenne MEDICAL
INFORMATION FOR GROWTH
www.avicenne.com

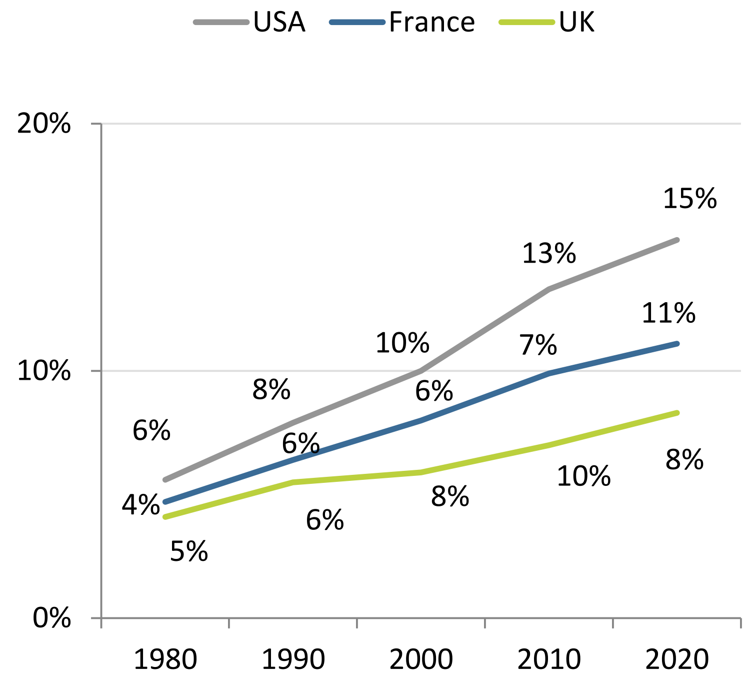
The market drivers: Demographic & Economic

Obesity in developed countries
% of inhabitants



Source : OCDE

Health expenses
% of GDP



Source : OCDE

TUTORIAL
Orthopaedics Market
June 2016

CONTACT

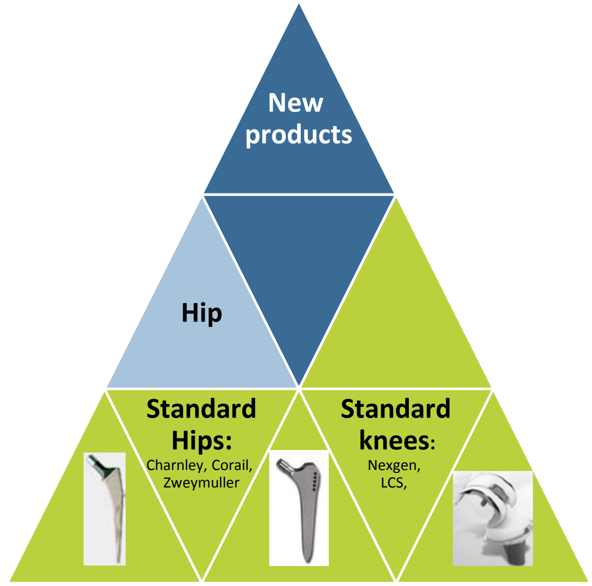
Ali MADANI
Phone: + 33 1 47 78 46 00
a.madani@avicenne.com

avicenne MEDICAL
INFORMATION FOR GROWTH
www.avicenne.com

Innovation and new products pull the market

Innovation, new surgical approach, new ancillaries and instruments … are the keys to capture new surgeons and to increase the average price. The most relevant innovations for the last two decades have been: cementless products, ceramic for hips, reversed shoulder, Trabecular products, etc.

- New products launch is at the core of the dynamic company development:
  - Innovations are boosting the market
  - They capture innovative surgeons
- Mature implants are becoming generic products and are attacking emerging country markets. Some standard products are re-boosted by minor or significant innovations.
- The most relevant innovations for the last two decades have been: cementless products, ceramic for hips, reversed shoulder, trabecular products, etc.



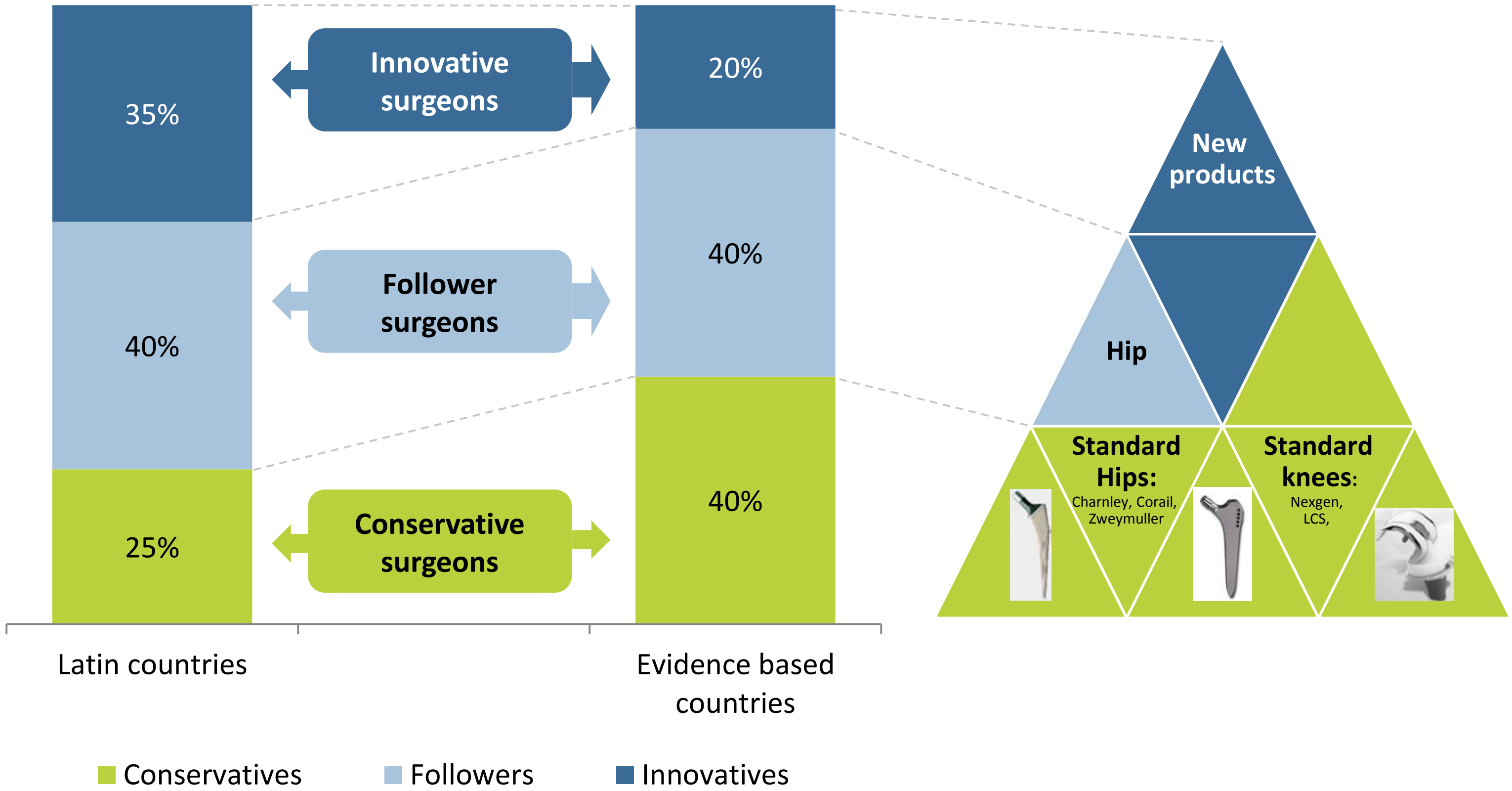
Worldwide orthopaedic Contract Manufacturing market report 2015-2020 & Top 100 player profiles

CONTACT
Ali MADANI
Phone: + 33 1 47 78 46 00
a.madani@avicenne.com

avicenne MEDICAL
INFORMATION FOR GROWTH
www.avicenne.com

Innovative surgeons are looking for new products. They are lured by new orthopaedic projects. Conservative surgeons mainly use standard products with decades of clinical evidences

% of the surgeons by category in each type of country



Sources: AVICENNE analysis

TUTORIAL
Orthopaedics Market
June 2015

CONTACT
Ali MADANI
Phone: + 33 1 47 78 46 00
a.madani@avicenne.com

avicenne MEDICAL
INFORMATION FOR GROWTH
www.avicenne.com

Europe

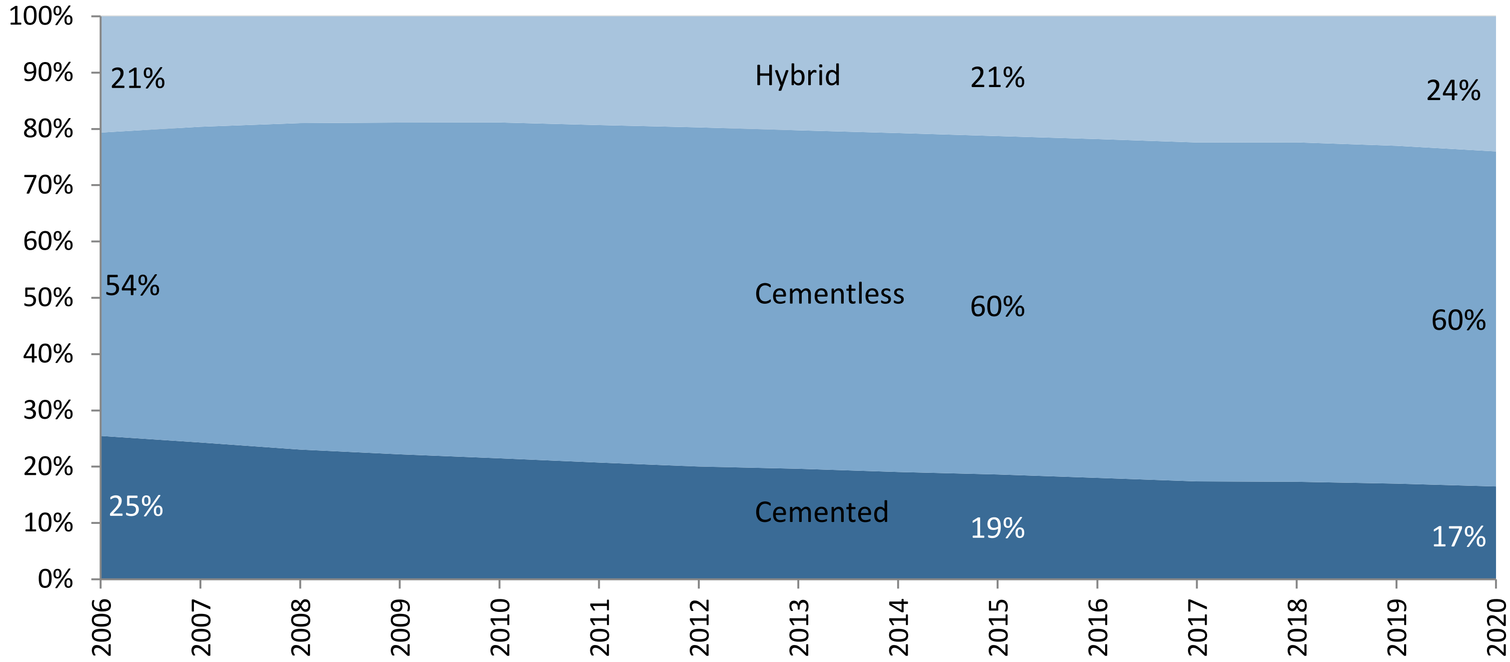
TUTORIAL
Orthopaedics Market
June 2016

CONTACT

Ali MADANI
Phone: + 33 1 47 78 46 00
a.madani@avicenne.com

Product Mix pulls the market
Total hip trends 2006-2020 (in volume)
Cemented, Cementless, Hybrid

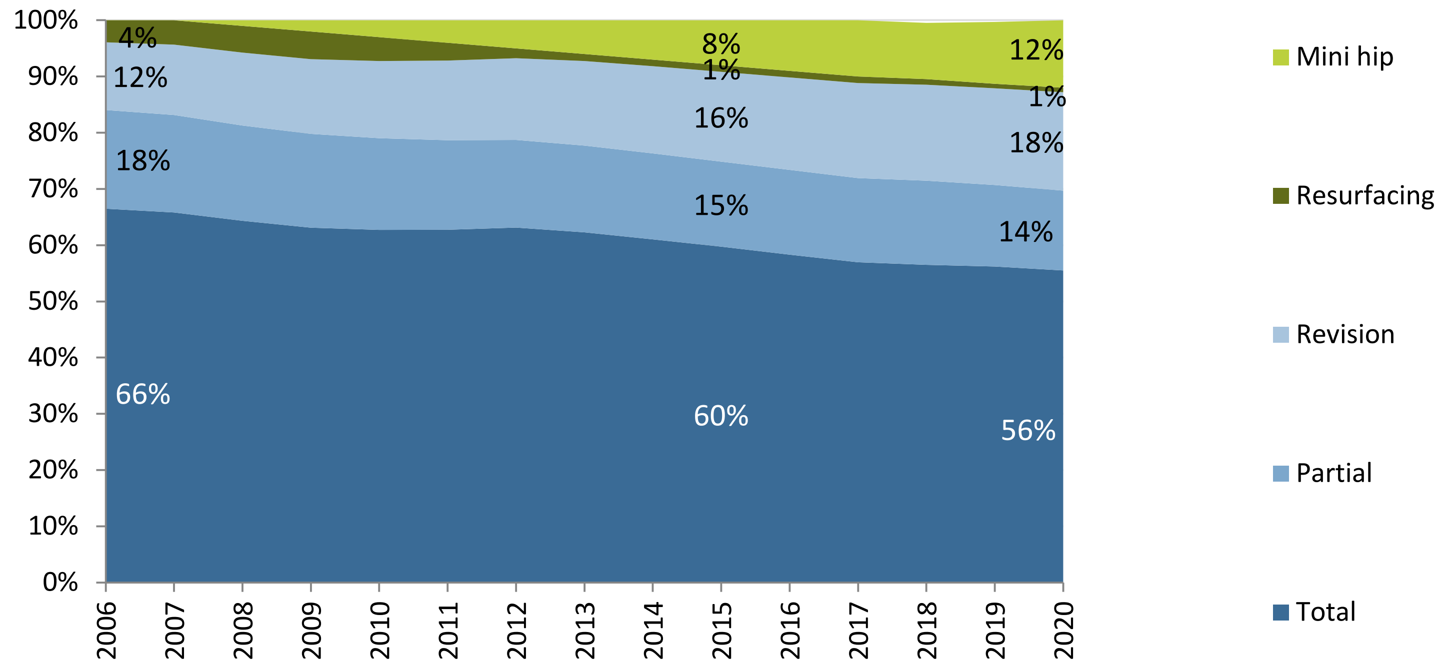
Cemented, Cementless & Hybrid ratio
(% of Total hip)



Source: Interviews & Avicenne Research & Analysis 2016

The revision driver: more and more people have more than one implant in their life
Hip implant trends 2006-2020 (in volume)

Total, Partial & Revision hip, mini hip Ratio (% of the global market)



Source: Interviews & Avicenne Research & Analysis 2016

avicenne MEDICAL
INFORMATION FOR GROWTH
www.avicenne.com

Europe

TUTORIAL
Orthopaedics Market
June 2016

CONTACT

Ali MADANI
Phone: + 33 1 47 78 46 00
a.madani@avicenne.com

avicenne MEDICAL
INFORMATION FOR GROWTH
www.avicenne.com

The market limiters (1/8)

Reimbursement	**Impact 1:** Price decrease **Impact 2:** Longer Time to market
Regulatory	**Impact 1:** Time to market **Impact 2:** Higher development Cost
Buying Groups	**Impact 1:** Price decrease **Impact 2:** More Low-end products demand

Source: Avicenne research & analysis 2016

TUTORIAL
Orthopaedics Market
June 2016

CONTACT
Ali MADANI
Phone: + 33 1 47 78 46 00
a.madani@avicenne.com

avicenne MEDICAL
INFORMATION FOR GROWTH
www.avicenne.com

The market limiters (2/8)
Reimbursement and pricing regulation

	USA	Germany	UK	Sweden	Italy	Belgium	Switzerland	France
Launch date & extension	1983	2003-2010	2002-2007	1992-1994	1994-1998	1984	2002	2003-2012
Classification system	DRG	G-DRG (derivate from Australian) system	HRG (derivate from US system)	Nordic DRG	ROD (derivate from US system)	APR-DRG (derivate from US system)	DRG (US system)	GHM (derivate from US system)
Targets	Coverage of all Medicare budgets	75% of C-DRG in 2007	Target of 100% HRG in 2006	Coexistence 50% DRG, 30% global dotation & 20% de reimburse ment	Coexistence of 80%-90% ROD, 6-7% planifica-tion funds , & 3-14% extra funds		Main application: every day expenses Invest-ments supported by the "cantons"	50% T2A in public hospitals & 100% in private and public in 2012

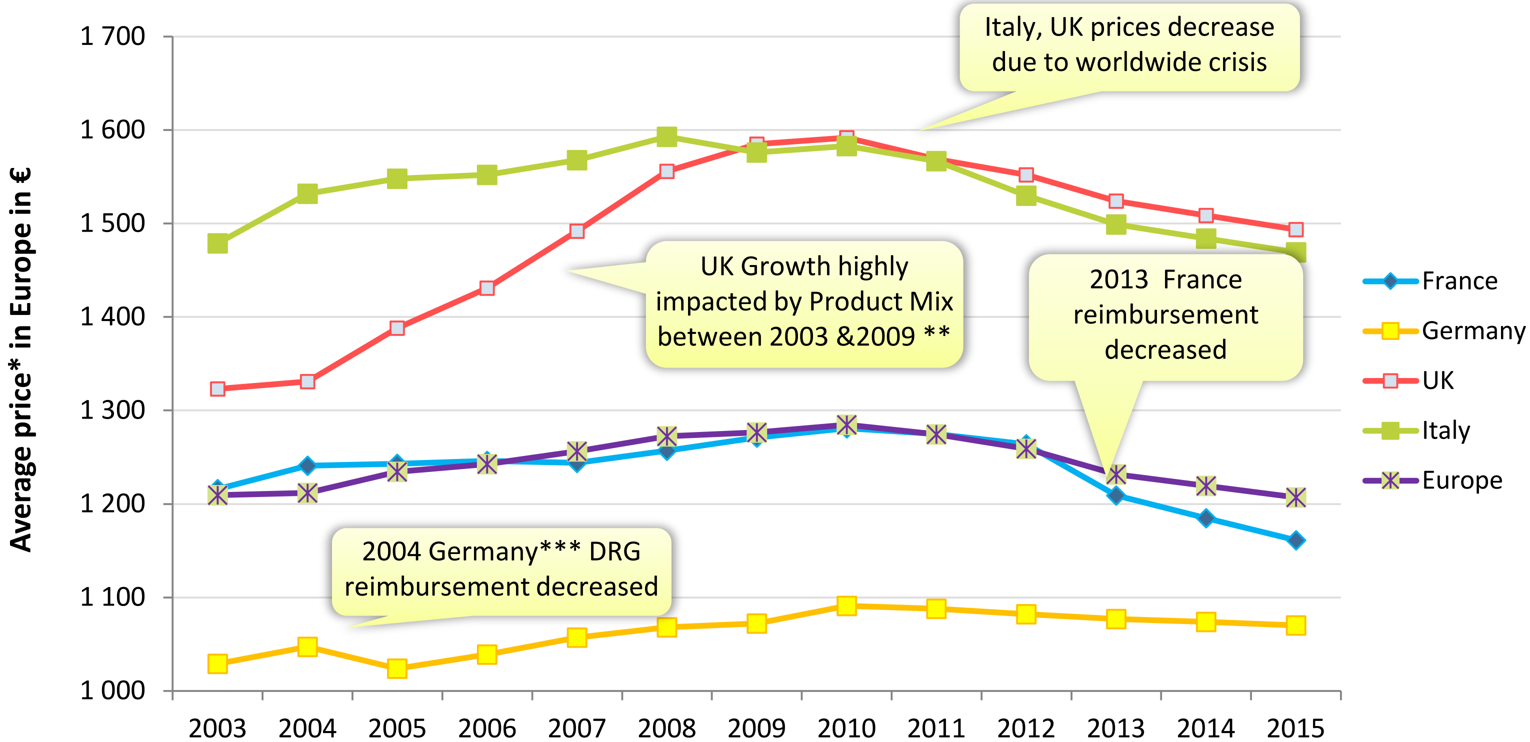
For more than 20 years, a general concern for controlling health expenses has started in the developing countries with the introduction of the DRG type systems

TUTORIAL
Orthopaedics Market
June 2016

CONTACT
Ali MADANI
Phone: + 33 1 47 78 46 00
a.madani@avicenne.com

The market limiters (3/8)
HIP average price* trend in Europe

After many years of constant average price growth due to product mix effect, with an increasing volume, European countries are trying to curtail the ballooning expenses. They used reimbursement price regulation to stabilize their spending.



** Average price in Europe in € = Total country market in value / total market in units, the average price is highly impacted by Product Mix effect*

** In 2003 in UK, the cementless hip was the lowest rate in Europe : 17% in UK, Vs 53% in France, 4% in Germany.This figure, 17%, increased drastically!

**** In Germany, ancillaries are billed separately by orthopaedic companies and not included in this average price*

Source: Avicenne European Orthoaedic market report 2015-2020

avicenne MEDICAL
INFORMATION FOR GROWTH
www.avicenne.com

Europe

TUTORIAL
Orthopaedics Market
June 2015

CONTACT

Ali MADANI
Phone: + 33 1 47 78 46 00
a.madani@avicenne.com

Price trends (4/8)

avicenne MEDICAL
INFORMATION FOR GROWTH
www.avicenne.com

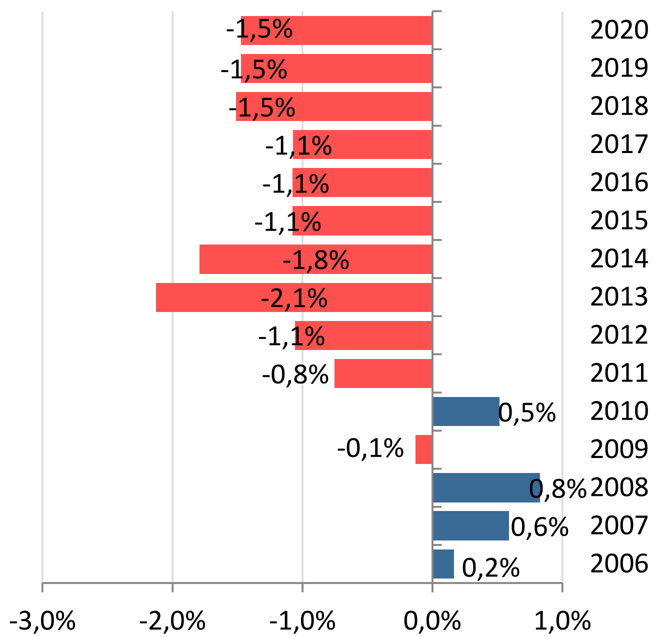
Europe

TUTORIAL
Orthopaedics Market
June 2016

CONTACT

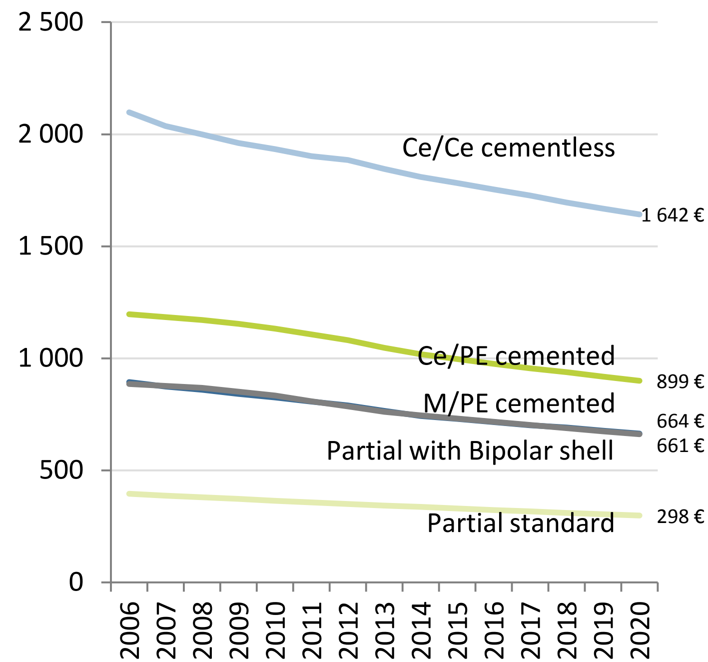
Ali MADANI
Phone: + 33 1 47 78 46 00
a.madani@avicenne.com

Average sales price trend per year for hips



Example of price decrease for each product (Euros)

Average forecasted price decrease/year from 2013 to 2020: -1.3 %



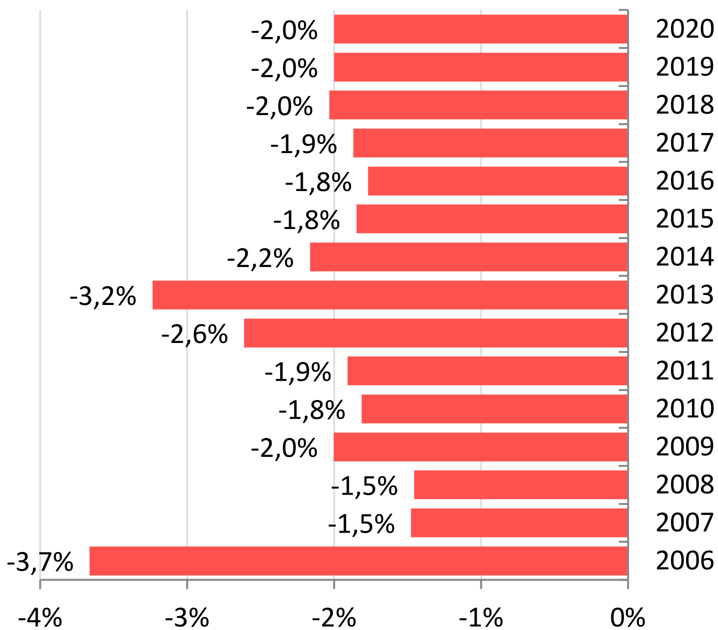
Source: Interviews & Avicenne Research & Analysis 2016

avicenne MEDICAL
INFORMATION FOR GROWTH
www.avicenne.com

Price trends (5/8)

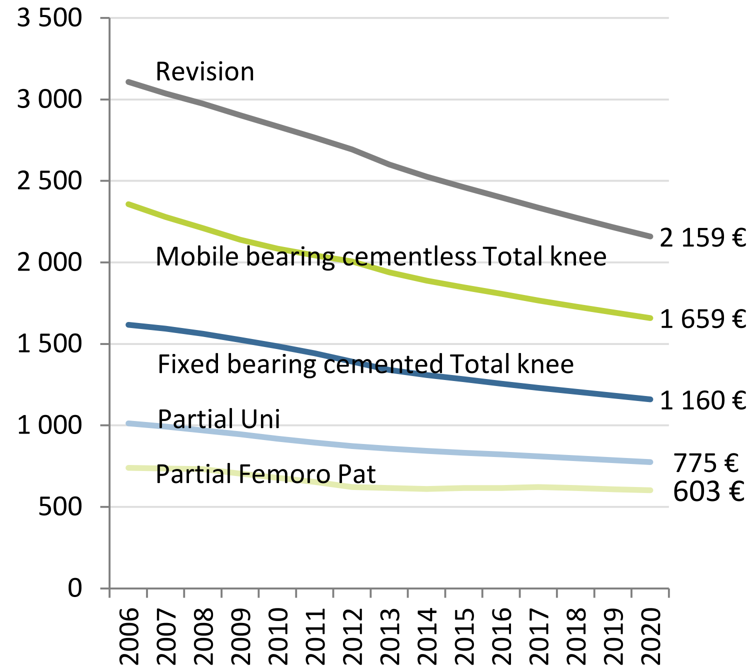
Europe

Average sales price trend per year for knees



Example of price decrease for each product (in Euros)

Average forecasted price decrease/year from 2013 to 2020: -1.9 %



Source: Interviews & Avicenne Research & Analysis 2016

TUTORIAL
Orthopaedics Market
June 2016

CONTACT

Ali MADANI
Phone: + 33 1 47 78 46 00
a.madani@avicenne.com

avicenne MEDICAL
INFORMATION FOR GROWTH
www.avicenne.com

Europe

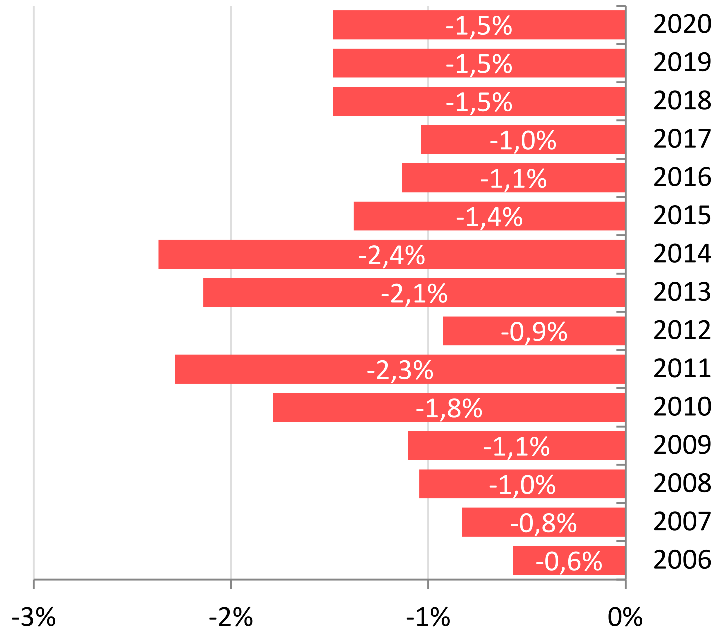
TUTORIAL
Orthopaedics Market
June 2016

CONTACT

Ali MADANI
Phone: + 33 1 47 78 46 00
a.madani@avicenne.com

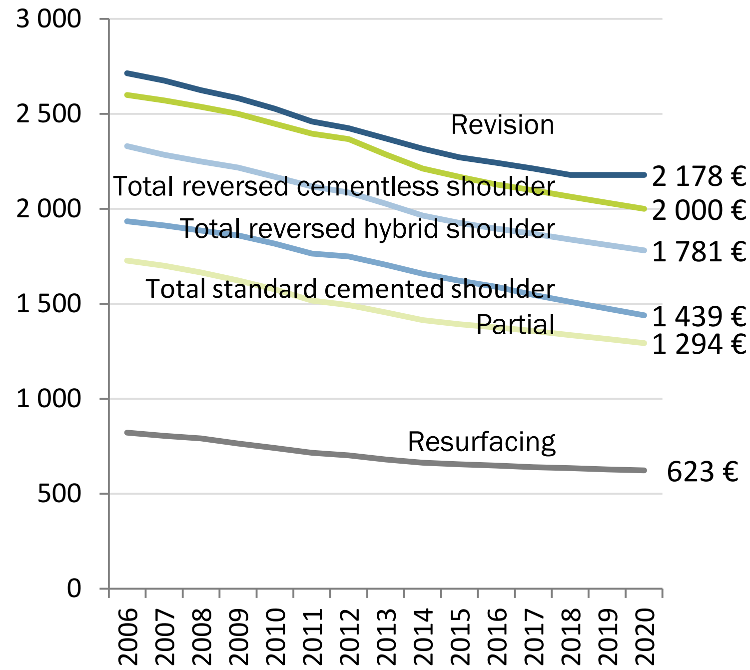
Price trends (6/8)

Average sales price trend per year for shoulders



Example of price decrease for each product

Average forecasted price decrease/year from 2013 to 2020: -1.5 %



Source: Interviews & Avicenne Research & Analysis 2016

avicenne MEDICAL
INFORMATION FOR GROWTH
www.avicenne.com

The market limiters (7/8) Regulatory, Certification,…

Regulatory

REFERENTS	DETAILS	IMPACT ON THE MARKET
European Directive 93/42	CE mark Clinical tests Sales autorization	Additional costs Longer time to market Concentration of the product range Limitation of new product launches
ISO 13 485	Medical devices vigilance system Certification of « whole production line »	Longer time to market Shared risks Additional Insurance costs Change in contract manufacturing practice

TUTORIAL
Orthopaedics Market
June 2016

CONTACT

Ali MADANI
Phone: + 33 1 47 78 46 00
a.madani@avicenne.com

avicenne MEDICAL
INFORMATION FOR GROWTH
www.avicenne.com

The market limiters (8/8)

Group purchasing developments in Germany drove the implant prices down… It now serves as a model in lot of other European countries

Group purchasing was a success in Germany…	- For example the basic knee (fixed tibial plate - cemented) is priced at 1 350 €, for some tenders a Major proposed 900 € for this basic product. - Another Major had in his customer portfolio the "Endoclinic and DAM Group" for 4 hospitals, with 10,000 knee and hip sales per year! Average price for the knee for this customer is much less than 1 000 €.
…it was much less successful in France and Italy	- Some private hospital groups in France like "Vitalia or Générale de Santé" have tried to centralize their implant purchasing, but it is only the beginning. The discounted price was only a few % lower and those hospitals have to share these savings with the "French Caisse d'Assurance Maladie". - The surgeon name reputation is considered as product marketing showcase of the private hospitals, which are making what is necessary to keep their surgeons. Hence they are not focusing on implants price reduction. - In Italy, purchasing groups make less than 10% of the total orthopaedic market value per year and growing slowly.

Source: Avicenne research & analysis 2016

TUTORIAL
Orthopaedics Market
June 2016

CONTACT

Ali MADANI
Phone: + 33 1 47 78 46 00
a.madani@avicenne.com

avicenne MEDICAL
INFORMATION FOR GROWTH
www.avicenne.com

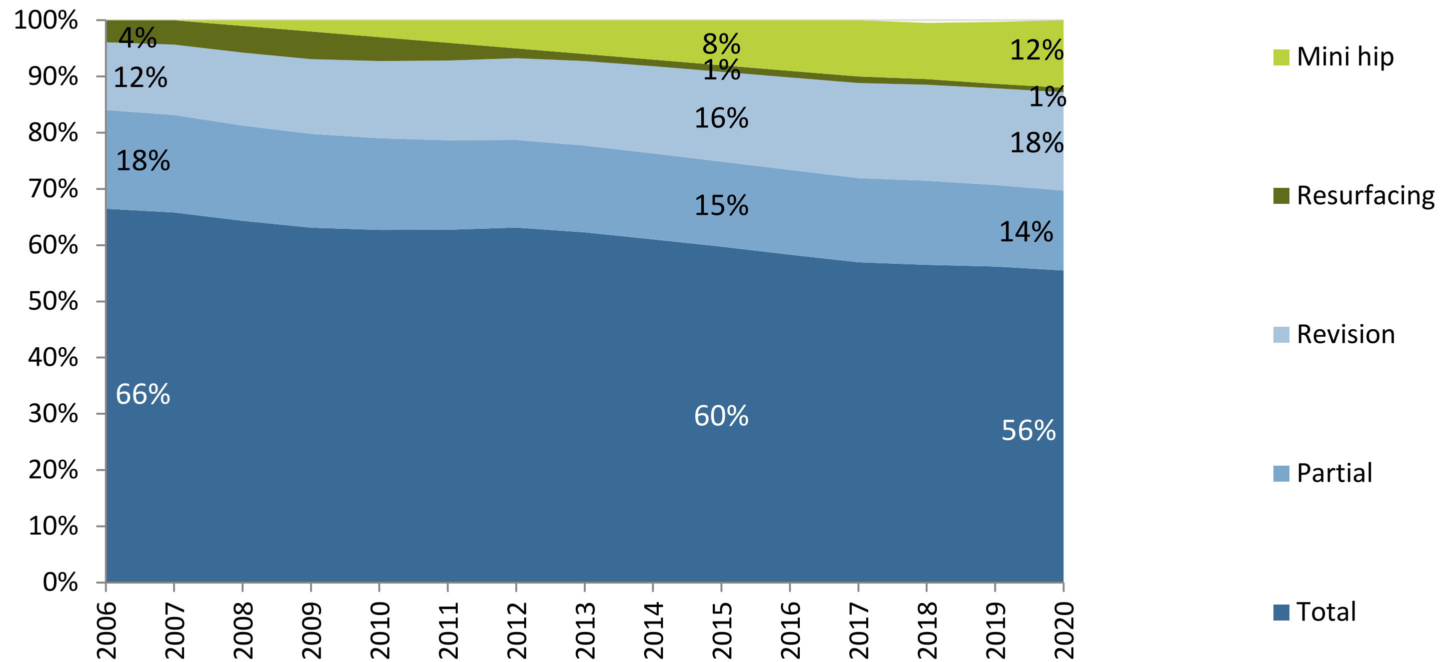
The revision driver: more and more people have more than one implant in their life

Hip implant trends 2006-2020 (in volume)

Total, Partial & Revision hip

Ratio (% of the global market)

Europe



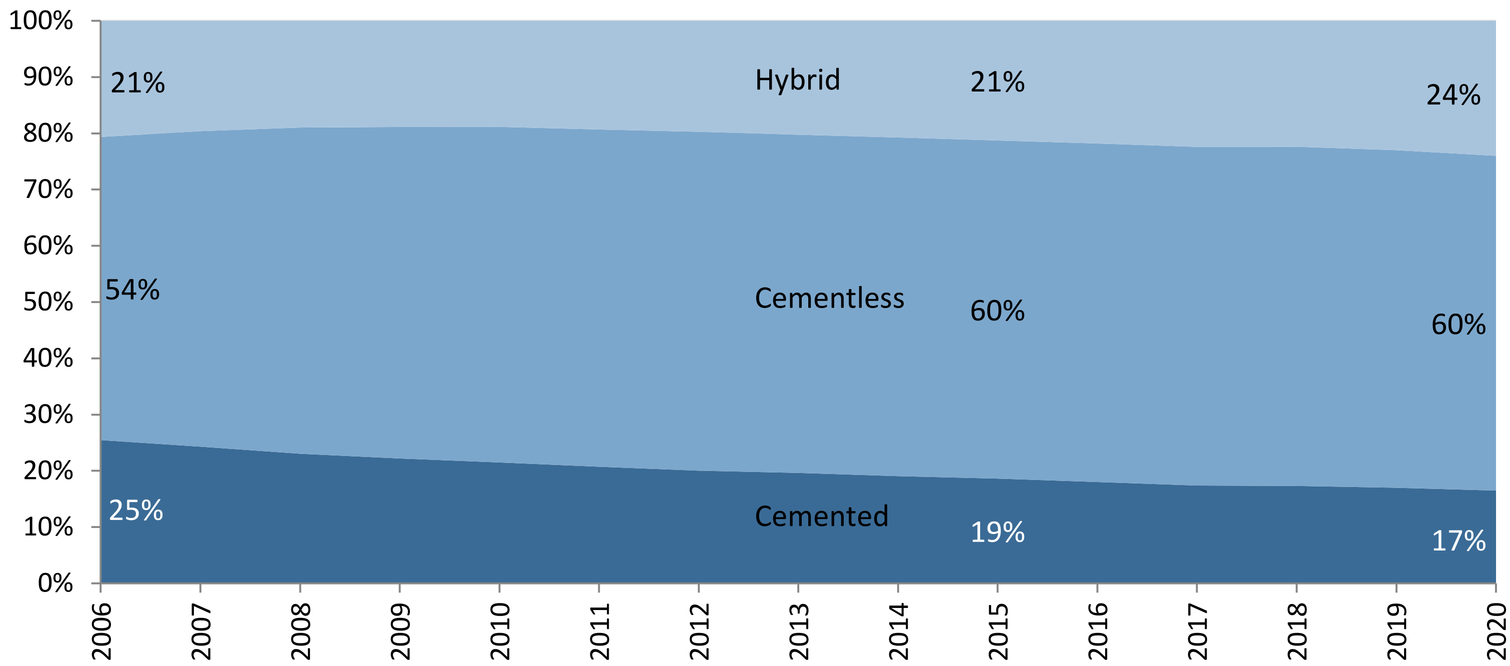
TUTORIAL
Orthopaedics Market
June 2016

Source: Interviews & Avicenne Research & Analysis 2016

CONTACT
Ali MADANI
Phone: + 33 1 47 78 46 00
a.madani@avicenne.com

Total hip trends 2006-2020 (in volume)
Cemented, Cementless, Hybrid

Cemented, Cementless & Hybrid ratio
(% of Total hip)



Source: Interviews & Avicenne Research & Analysis 2016

avicenne MEDICAL
INFORMATION FOR GROWTH
www.avicenne.com

Europe

TUTORIAL
Orthopaedics Market
June 2016

CONTACT

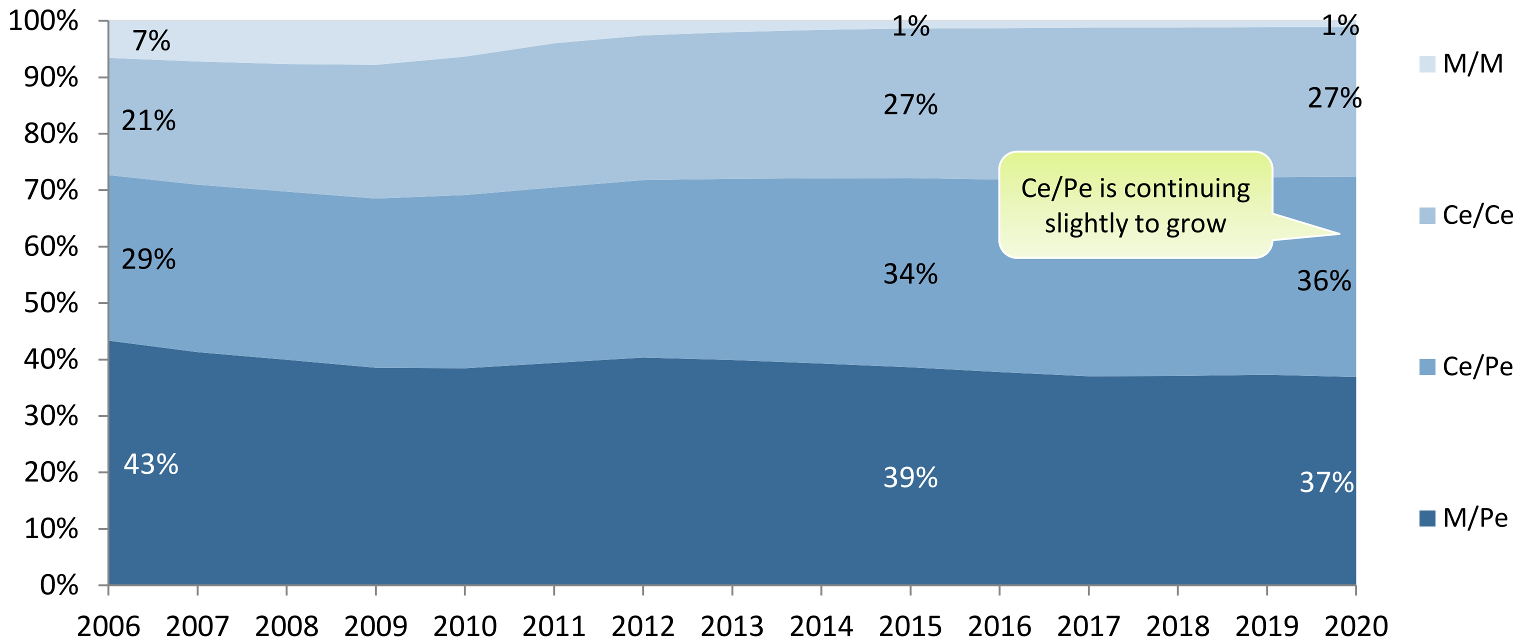
Ali MADANI
Phone: + 33 1 47 78 46 00
a.madani@avicenne.com

avicenne MEDICAL
INFORMATION FOR GROWTH
www.avicenne.com

Cementless trends 2006 – 2020 M/Pe, Ce/Pe, Ce/Ce, M/M

M/Pe, Ce/Pe, Ce/Ce & M/M ratio

(% of Cementless & Hybrid Total hip)



Source: Interviews & Avicenne Research & Analysis 2016

Europe

TUTORIAL
Orthopaedics Market
June 2016

CONTACT

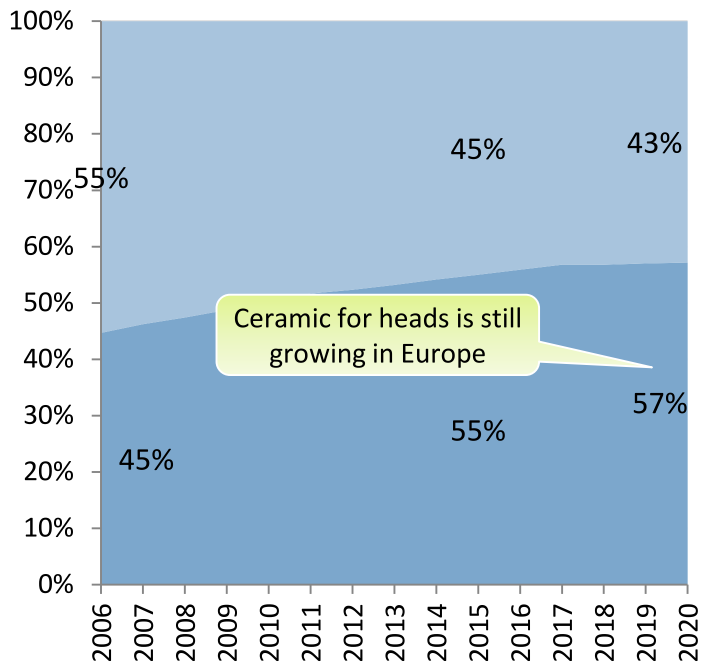
Ali MADANI
Phone: + 33 1 47 78 46 00
a.madani@avicenne.com

Ceramic, Metal & PE trends for Heads and Cups 2006-2020

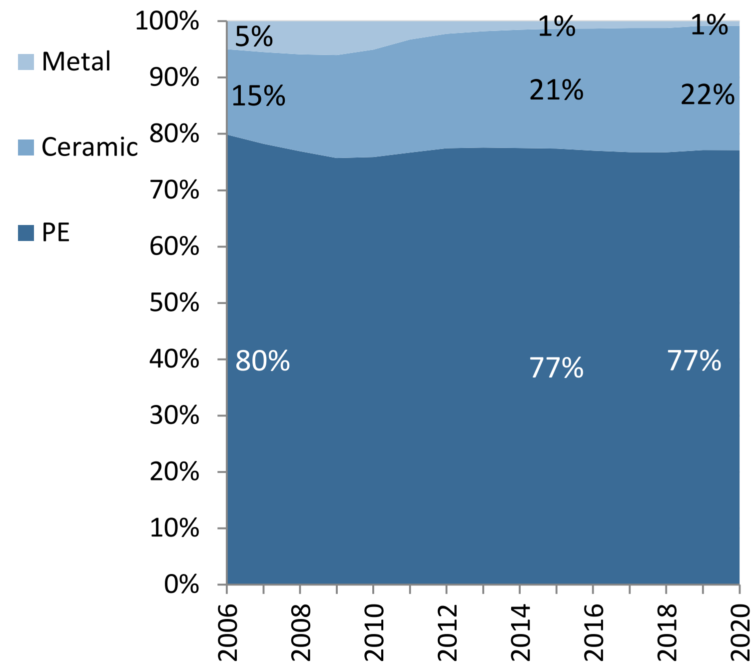
Europe

TUTORIAL
Orthopaedics Market
June 2016

% of Metal & Ceramic HEAD



% of Metal, Ceramic & PE CUP



Source: Interviews & Avicenne Research & Analysis 2016

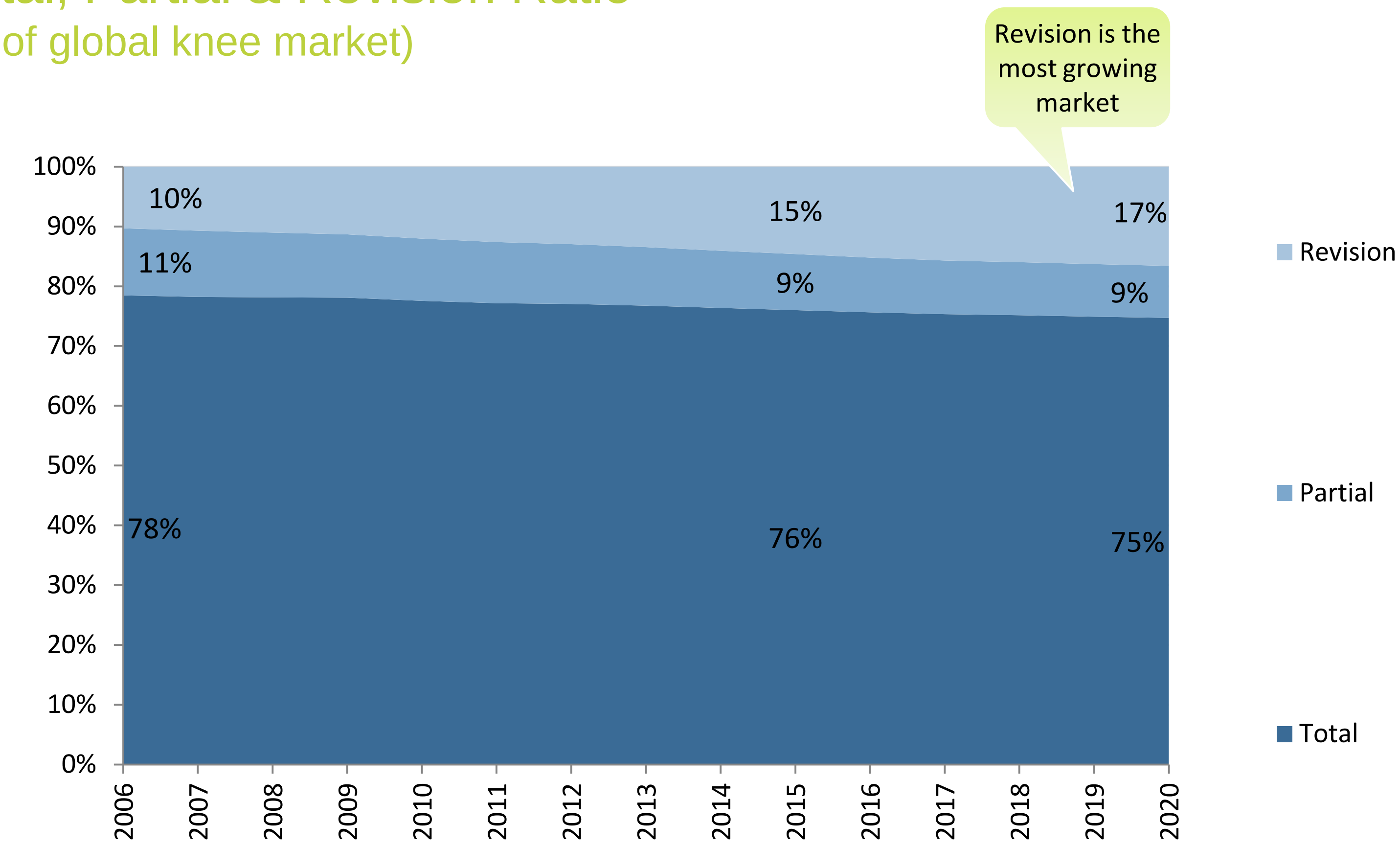
CONTACT

Ali MADANI
Phone: + 33 1 47 78 46 00
a.madani@avicenne.com

avicenne MEDICAL
INFORMATION FOR GROWTH
www.avicenne.com

Knee implant trends 2006-2020 Total, Partial, Revision

Total, Partial & Revision Ratio
(% of global knee market)



Source: Interviews & Avicenne Research & Analysis 2016

Europe

TUTORIAL
Orthopaedics Market
June 2016

CONTACT

Ali MADANI
Phone: + 33 1 47 78 46 00
a.madani@avicenne.com

avicenne MEDICAL
INFORMATION FOR GROWTH
www.avicenne.com

Europe

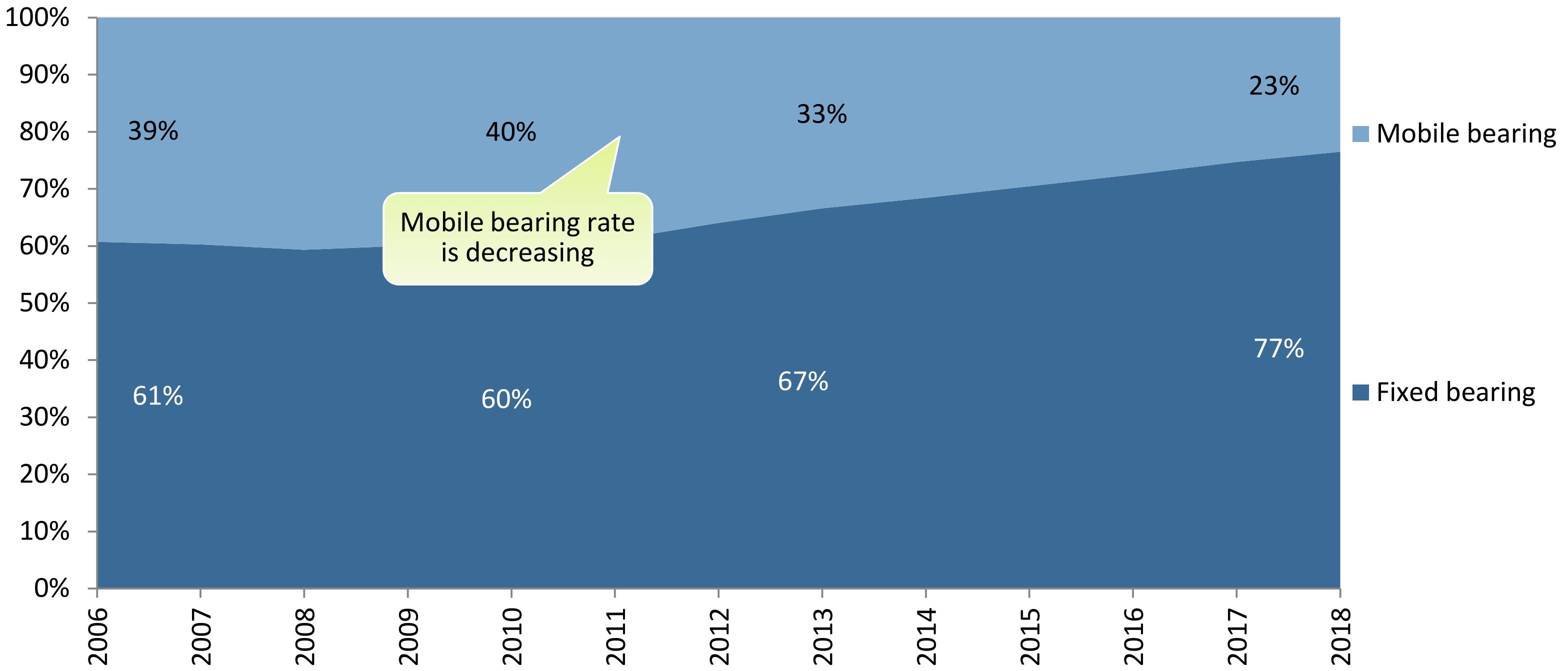
TUTORIAL
Orthopaedics Market
June 2016

CONTACT

Ali MADANI
Phone: + 33 1 47 78 46 00
a.madani@avicenne.com

Total knee trends 2006-2020 (in volume)
Fixed bearing *Vs.* Mobile bearing

Fixed VS Mobile bearing Ratio
(% of Total knees)



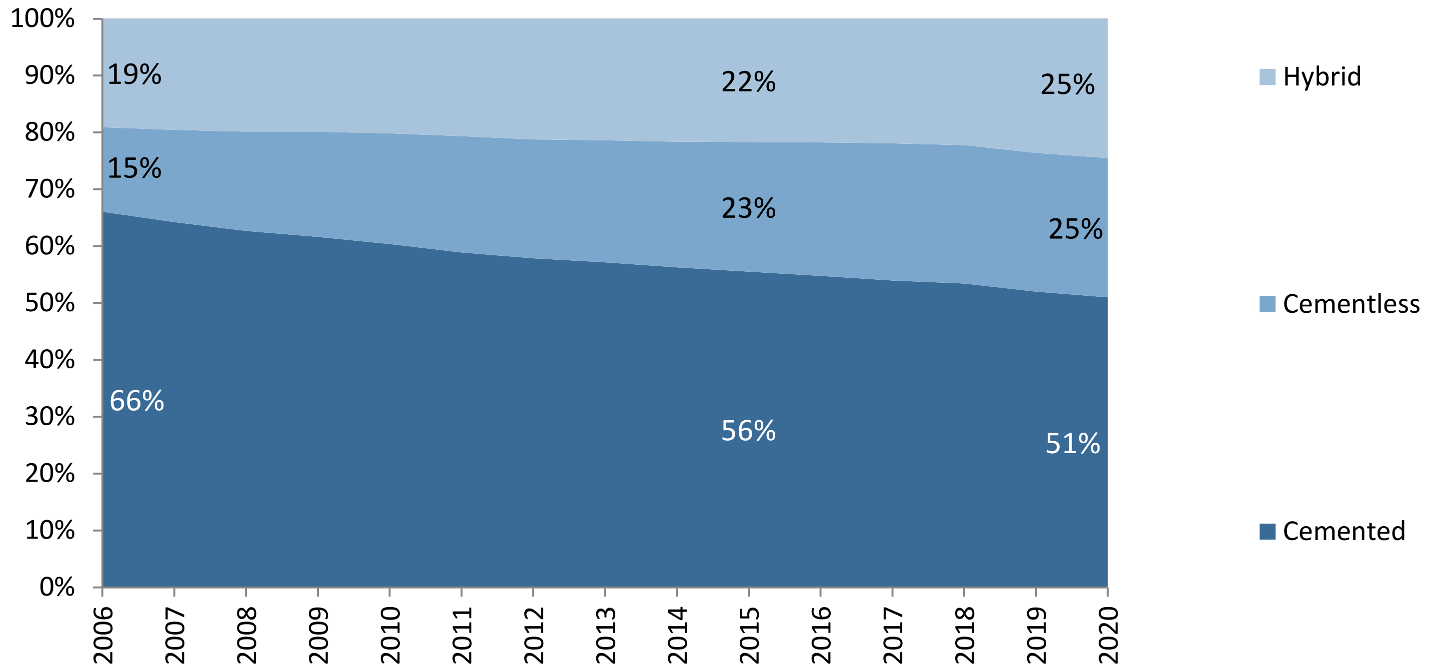
Source: Interviews & Avicenne Research & Analysis 2016

avicenne MEDICAL
INFORMATION FOR GROWTH
www.avicenne.com

Fixed bearing knee trends 2006-2020 Cemented, Cementless, Hybrid

Cemented, cementless & hybrid ratio (% of fixed bearing Total knees)

Europe



Source: Interviews & Avicenne Research & Analysis 2016

TUTORIAL
Orthopaedics Market
June 2016

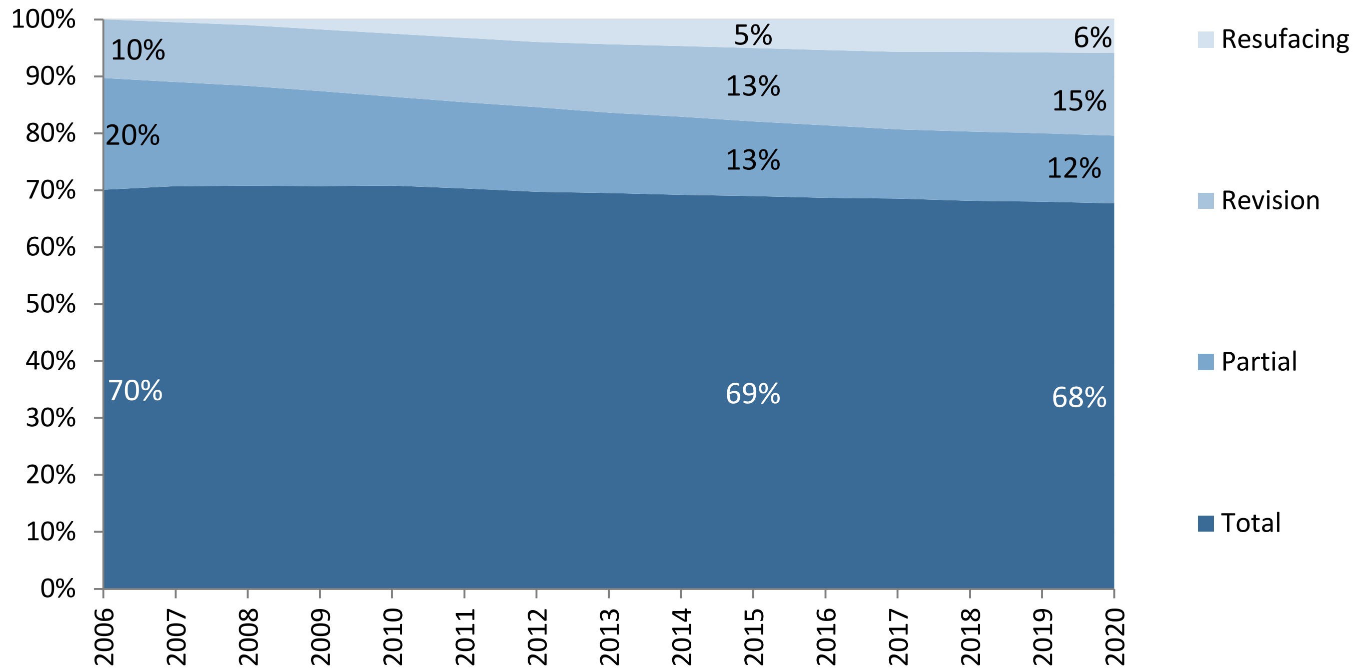
CONTACT
Ali MADANI
Phone: + 33 1 47 78 46 00
a.madani@avicenne.com

avicenne
MEDICAL
INFORMATION FOR GROWTH
www.avicenne.com

Shoulder implant trends 2006-2020
Total, Partial, Revision, Resurfacing

Total, Partial, Revision, Resurfacing shoulders Ratio
(% of global shoulder market)

Europe



Source: Interviews & Avicenne Research & Analysis 2016

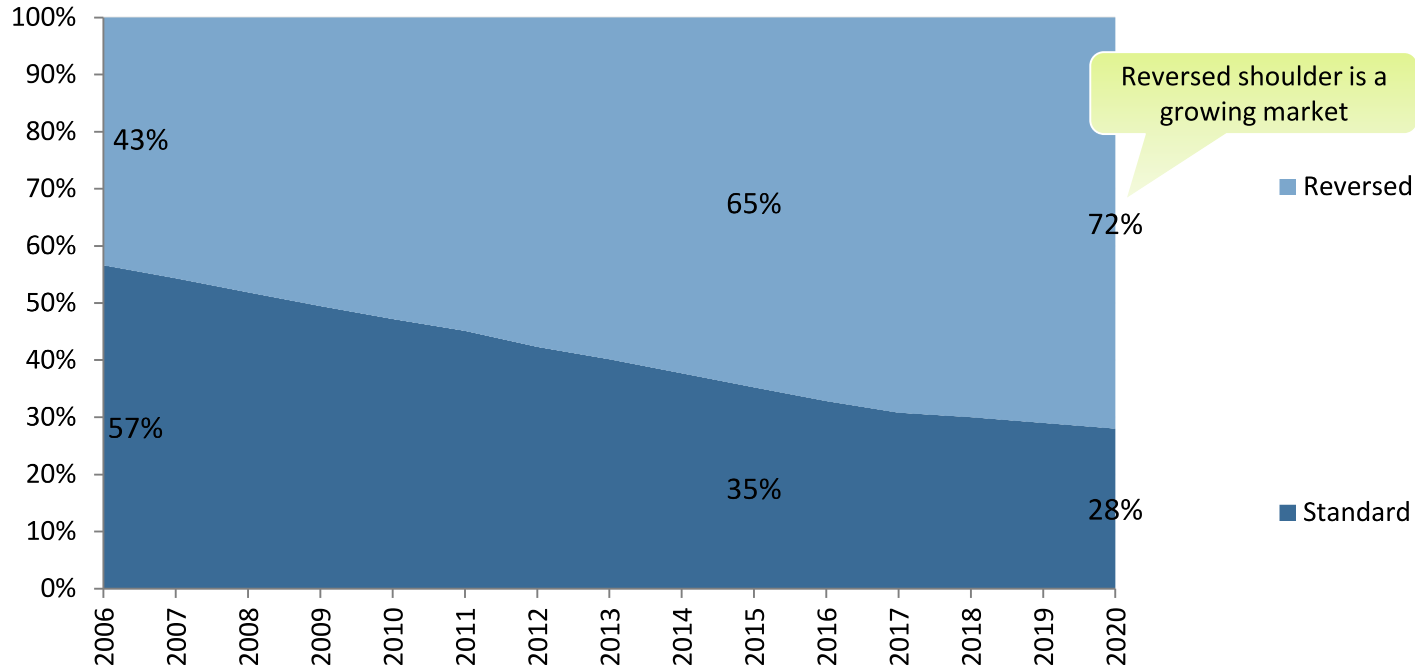
TUTORIAL
Orthopaedics Market
June 2016

CONTACT
Ali MADANI
Phone: + 33 1 47 78 46 00
a.madani@avicenne.com

avicenne MEDICAL
INFORMATION FOR GROWTH
www.avicenne.com

Shoulder implant trends 2006-2020 Standard Vs. Reversed

Total modular Shoulder implants Standard Vs Reversed
(% of global shoulder market)



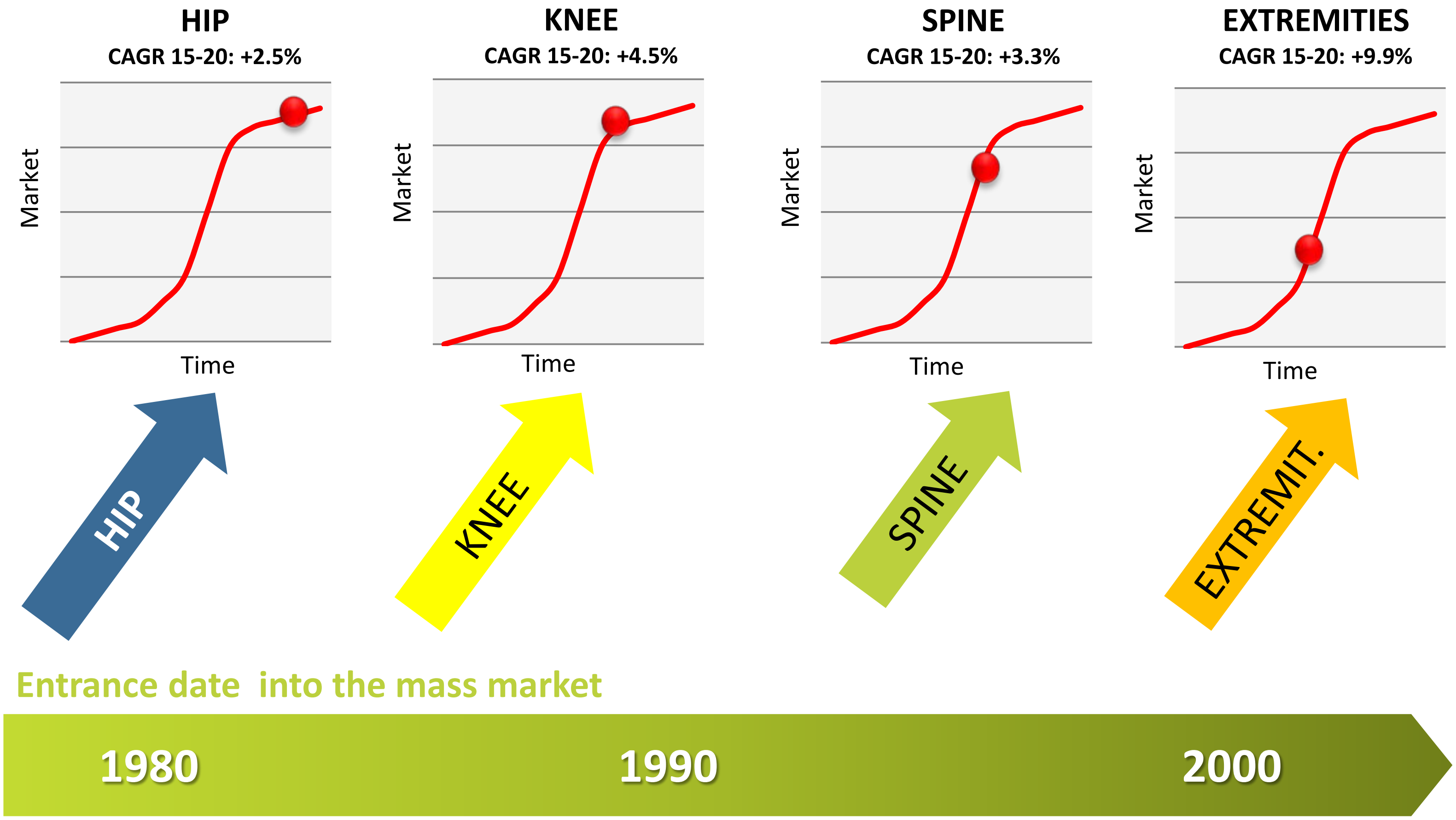
Source: Interviews & Avicenne Research & Analysis 2016

Europe

TUTORIAL
Orthopaedics Market
June 2016

CONTACT
Ali MADANI
Phone: + 33 1 47 78 46 00
a.madani@avicenne.com

The life cycle of the orthopaedic products: Growth forecasts by 2020



Source: Avicenne research & analysis 2016

avicenne MEDICAL
INFORMATION FOR GROWTH
www.avicenne.com

TUTORIAL
Orthopaedics Market
June 2016

CONTACT

Ali MADANI
Phone: + 33 1 47 78 46 00
a.madani@avicenne.com

avicenne MEDICAL

INFORMATION FOR GROWTH

www.avicenne.com

Worldwide orthopaedic market forecasts

Worldwide orthopaedic market: CAGR 2015-2020 +4.4 %

Orthopaedics market Drivers in 2000-2010 were:

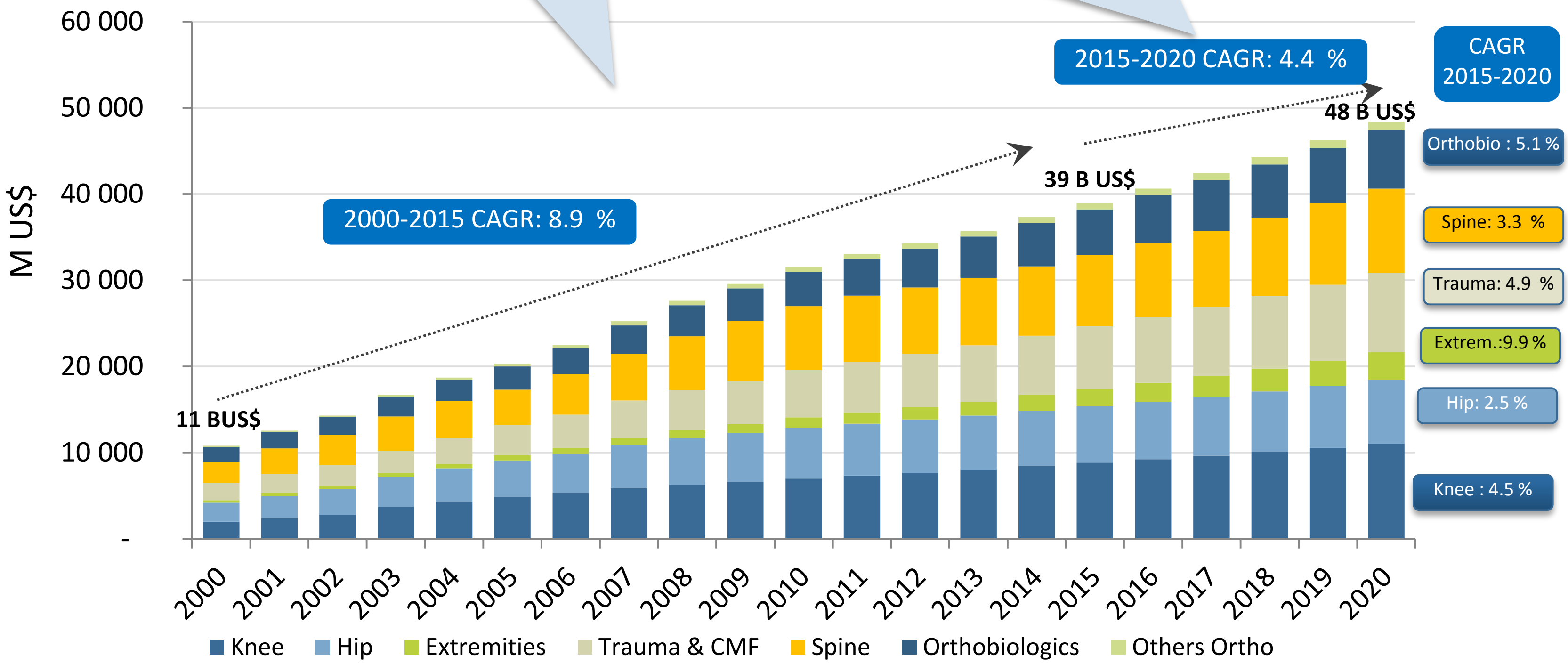
- Huge growth in hip & knee in developed countries
- USA : No price erosion, Europe slow price erosion
- Huge growth in spine procedures

Orthopaedics market Drivers: 2015-2020

- High growth in volume in emerging countries
- Orthobiologics growth in developed countries
- Extremities become multi Billion market with double-digit growth
- Trauma with historical constant growth
- Niche segments with high growth: vertebral disks, vertebroplasty, trabecular products,...

Orthopaedics market limiters : 2015-2020

- Price pressure at the end-market level
- Continuous regulatory cost increase
- Purchasing group power, in certain countries



Source: Avicenne analysis 2016

TUTORIAL
Orthopaedics Market
June 2016

CONTACT

Ali MADANI
Phone: + 33 1 47 78 46 00
a.madani@avicenne.com

avicenne
MEDICAL
INFORMATION FOR GROWTH
www.avicenne.com

Summary

- The orthopaedics market, including hip, knee, spine, trauma, extremities and Orthobiologics accounted for more than US$39B in 2015, with 4.3% growth.
- The United States remains the largest market due to historical trends & higher sale prices. In Europe, Germany is by far the biggest market for all segments. Followed by the UK, France & Italy.
- Even the 5 major companies, controlling more than 60% of the worldwide orthopaedics market, have continuously loose market share to the challengers. The challengers have gained 1 to 2% market share per year (US$400 to 800 additional revenue), achieving US$15B in revenue in 2015 (13 US$15B in 2014!) .
- The only way for the Majors to have two-digit growth is by acquiring rivals (Depuy & Synthes, Zimmer & Biomet, Medtronic & Covidien).
- A huge gap remains between the size of the Majors and that of the Challengers. The revenues of the Majors are 10 to 50 times bigger of the Challengers. But the Challengers are growing more rapidly, on average by 15%, due to their wider range of products, their local, high level services. They are also attracting new sales forces.
- The main drivers of the orthopaedics market remain demographic & economic parameters. Product innovation, resulting in a better (or higher) Product Mix, is boosting the market.
- The reimbursement trend results in price pressure. This is the main limiter of the orthopaedic market. Price erosion of mature products in orthopaedics has been a constant over the past 20 years. We do not expect a major shift, but some countries will suffer a more significant price decrease than others.

CONTACT
Ali MADANI
Phone: + 33 1 47 78 46 00
a.madani@avicenne.com

avicenne
MEDICAL
INFORMATION FOR GROWTH
www.avicenne.com

Summary

- Regulatory issues are becoming heavier and resulting in a longer time to market for new product launches, additional costs and a more limited range of products.
- Competition is fierce. In each country, the local challengers have a robust market share: Aesculap & Link for example in Germany, Lima & Adler in Italy, Amplitude in France, etc.
- Revision Implants are growing for all types of implants, cementless & Hybrid products continue to gain market share. Reversed shoulder, mini hip, Trabecular for hips and cages are examples of growing segments.
- In spite of regulatory issues & reimbursement trends, the orthopaedics market must continue to introduce innovations & new products and instruments to improve the new, less invasive and much more reliable surgical techniques.
- In 2000, this market was US$11 B It grew to US$39B in 2015, and it will achieve around US$48 B in 2020.
- That represents an average of 4.4% growth in the coming years.

TUTORIAL
Orthopaedics Market
June 2016

THANK YOU

CONTACT

Ali MADANI
Phone: + 33 1 47 78 46 00
a.madani@avicenne.com