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# **Chirurgie transorale et robotique dans les cancers de l'oropharynx : bilan et perspectives**



# Les différents types de chirurgie trans-orale

- Chirurgie trans-orale conventionnelle
- Chirurgie robotique trans-orale (TORS)
- Chirurgie trans-orale microscopique à laser (TLM)

# Les différences entre TLM et TORS

TLM



mikroskope

TORS



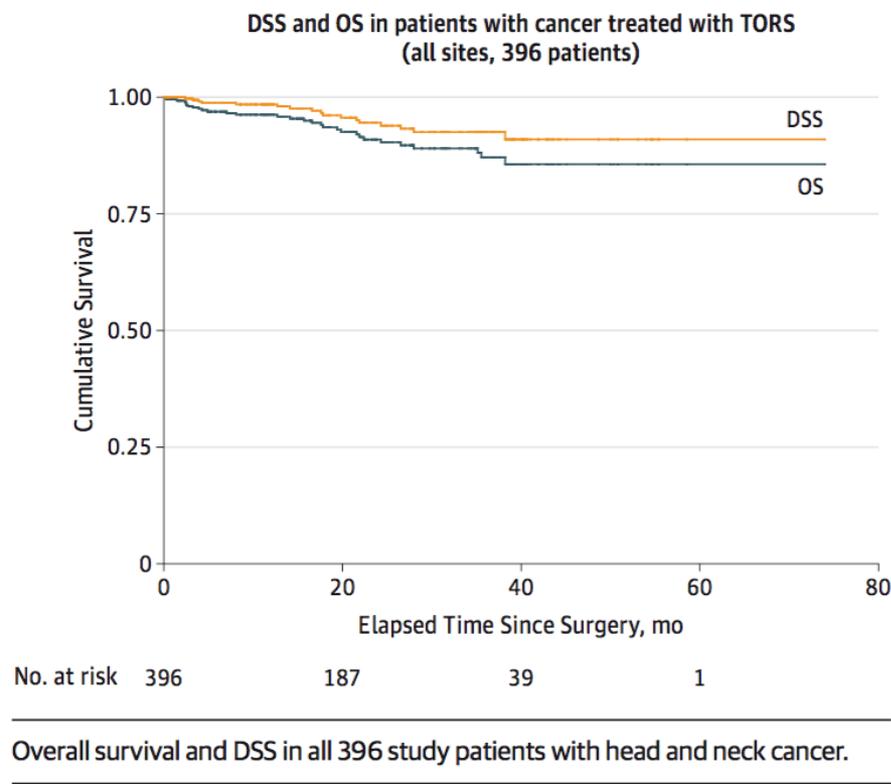
Robot avec endoscope

# Set-up et résection d'un cancer oropharyngée



# Expérience sur TORS du cancer de l'oropharynx

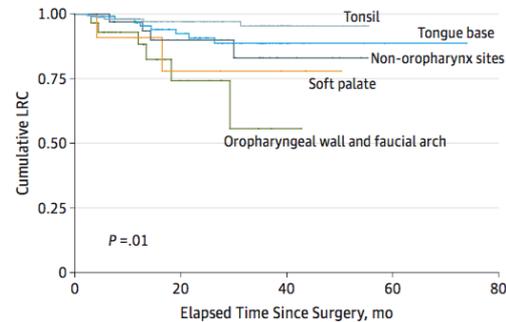
Figure 2. Overall Survival (OS) and Disease-Specific Survival (DSS) for Patients Treated With Transoral Robotic Surgery (TORS)



# Expérience sur TORS du cancer de l'oropharynx

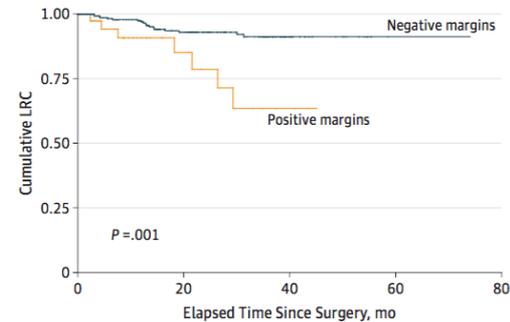
Figure 1. Locoregional Control (LRC) for Patients Treated With Transoral Robotic Surgery (TORS)

**A** LRC in patients with oropharyngeal cancer treated with TORS



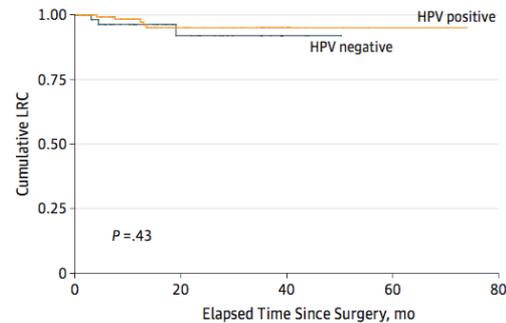
No. at risk	0	20	40	60
Non-OP sites	40	21	5	0
Tongue base	128	59	11	1
OP wall and faucial arch	33	8	1	0
Soft palate	14	5	3	0
Tonsil	181	86	17	0

**B** LRC by pathologic margin status



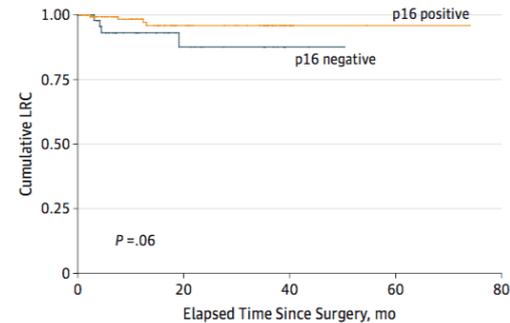
No. at risk	0	20	40	60
Negative margin	342	160	34	1
Positive margin	39	15	3	0

**C** LRC by HPV status in patients with oropharyngeal cancer treated with TORS



No. at risk	0	20	40	60
HPV negative	67	21	3	0
HPV positive	155	70	16	1

**D** LRC by p16 status in patients with oropharyngeal cancer treated with TORS



No. at risk	0	20	40	60
p16 negative	58	16	2	0
p16 positive	154	64	13	1

Locoregional control by oropharyngeal subsite in all patients and pathologic margin status, human papillomavirus (HPV) status, and p16 status in patients with oropharyngeal primary tumors.

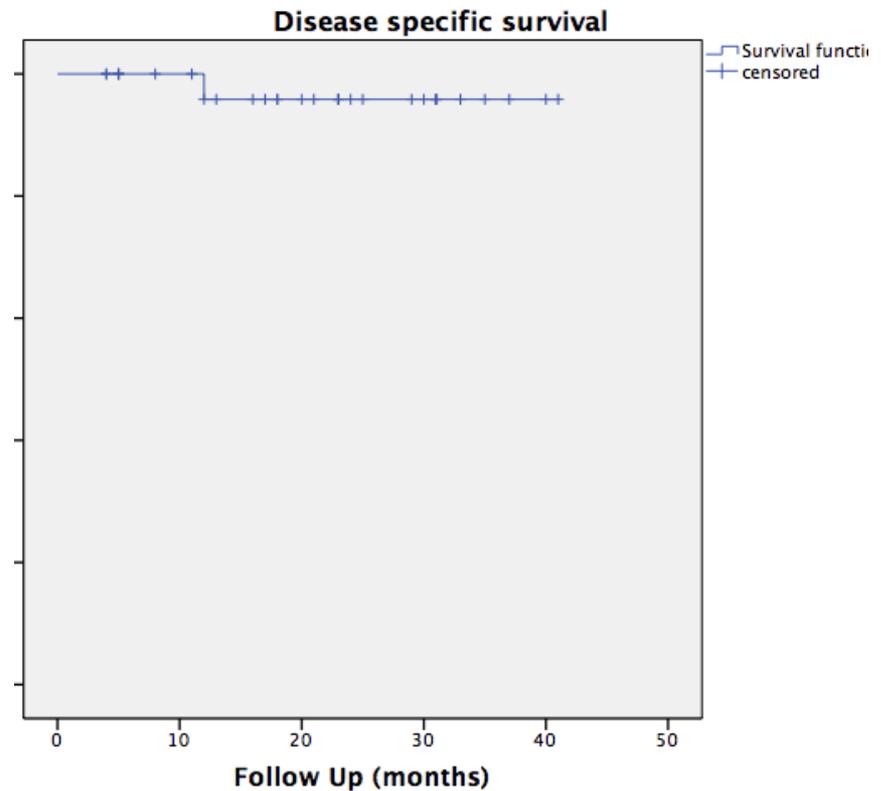
# “Functional outcome” chez TORS/TLM avec au final A(C)RT

	TORS/TLM	TNM	Adj. tx	Functional outcome 1Y
Chen 2014	TORS/TLM	T1-3/N1-2c	RT 100%	UW_QOL for swallowing at <b>91.5/100</b>
Sinclair 2011	TORS	T1-2/N0-2c	CRT 31% / RT 45%	MDADI from pre-tx <b>82 to post-tx 74</b>
Genden 2011	TORS	T1-2/N0-2c	CRT 60% / RT 20%	PSS-HN and FOIS <b>back to baseline</b>
Leonhardt 2012	TORS	T1-4/N0-2b	CRT 19% / RT 60%	PSS-HN <b>back to baseline</b> for diet and eating, reduced for speech
More 2012	TORS	T1-3/N0-2c	CRT 60% / RT 20%	MDADI <b>back to baseline</b>
Haughey 2011	TLM	T1-4/N0-3	CRT 16% / RT 58%	FOSS back to <b>0-2 in 87%</b>
Grant 2006	TLM	T1-4/N0-3	CRT 0% / RT 47%	FOSS <b>back to baseline</b>

# Résultats d'étude CHUV: Cohorte prospective

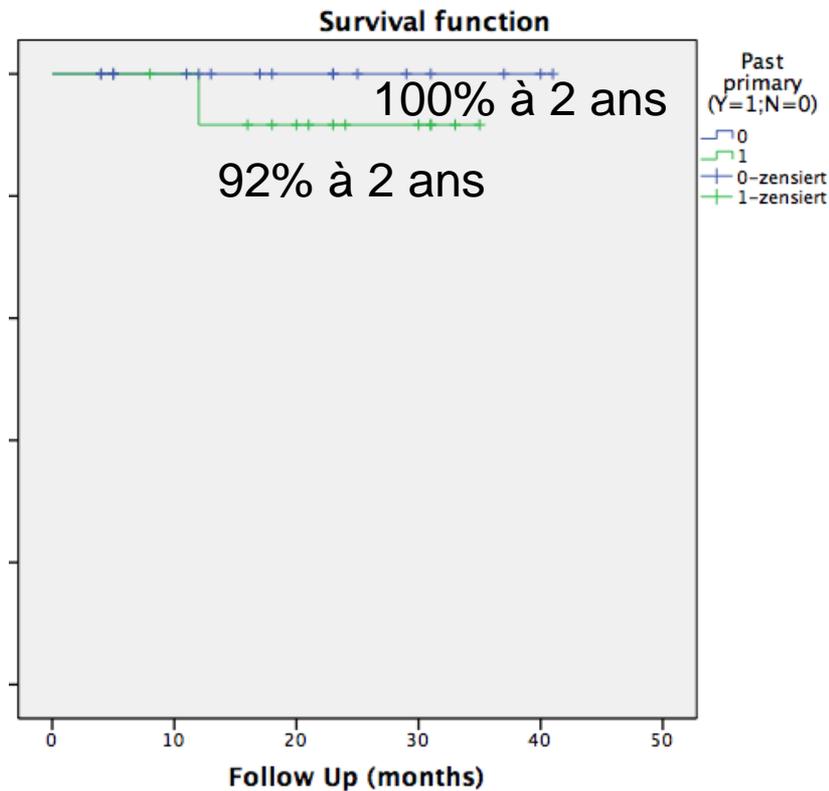
- 31 patients depuis 7/2012 (20 stade précoce/11 stade avancé)
- Critères d'exclusion: >T2, >N2b, non-exposable pour abord trans-orale, EE selon CT/MRT
- 13 patients avec antécédent d'un cancer épidermoïde (6 patients avec antécédent d'une RT)
- 46,7% HPV positive
- 32,3% RT (6,5% CRT)

## Survie spécifique à 2 an: 96%

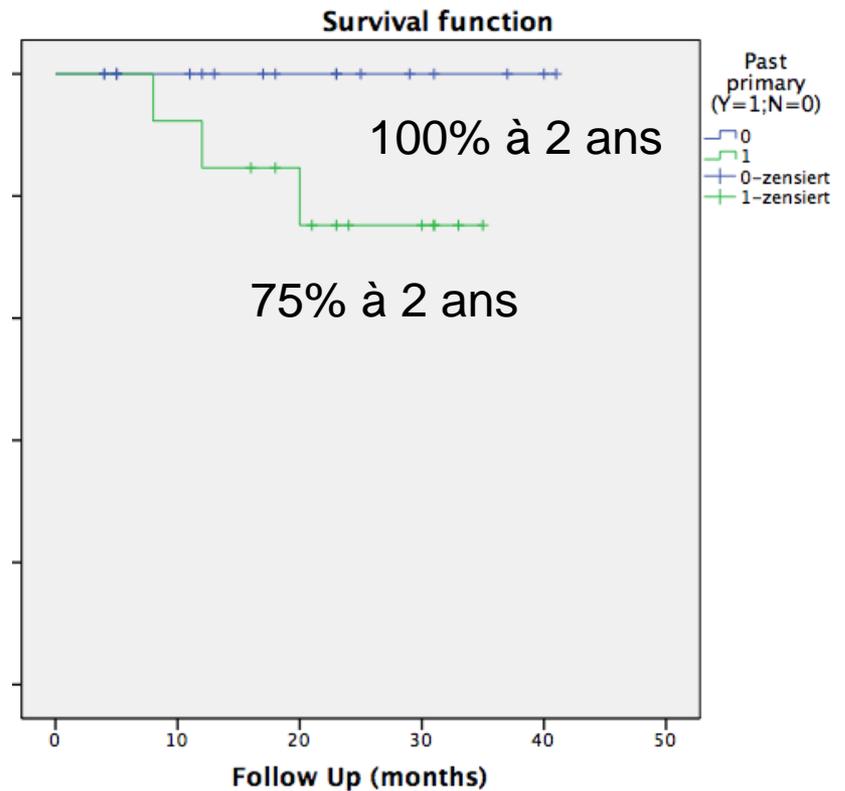


# Survie spécifique et globale: Différence entre des patients avec des tumeurs primaires et secondaires

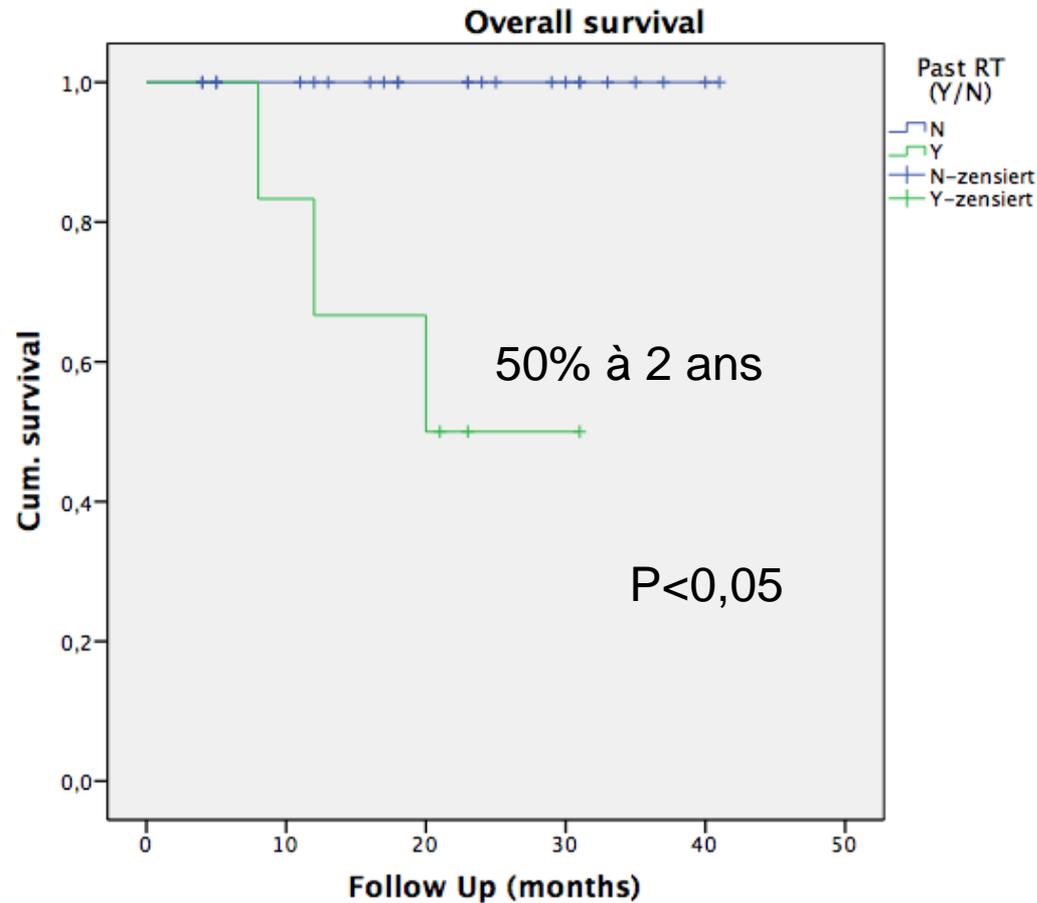
## Survie spécifique



## Survie globale



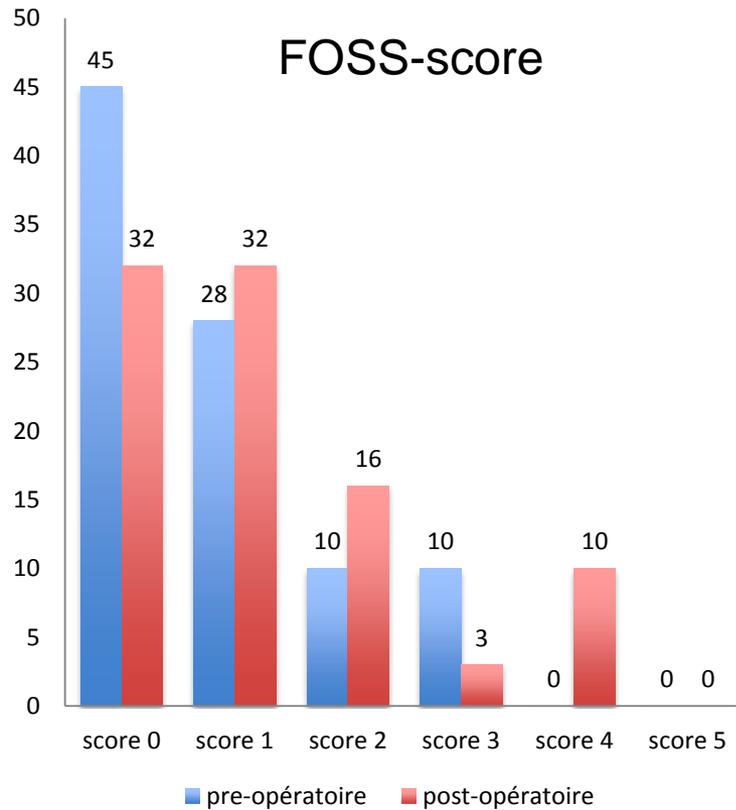
# Survie globale: Impact de la RT pré-thérapeutique



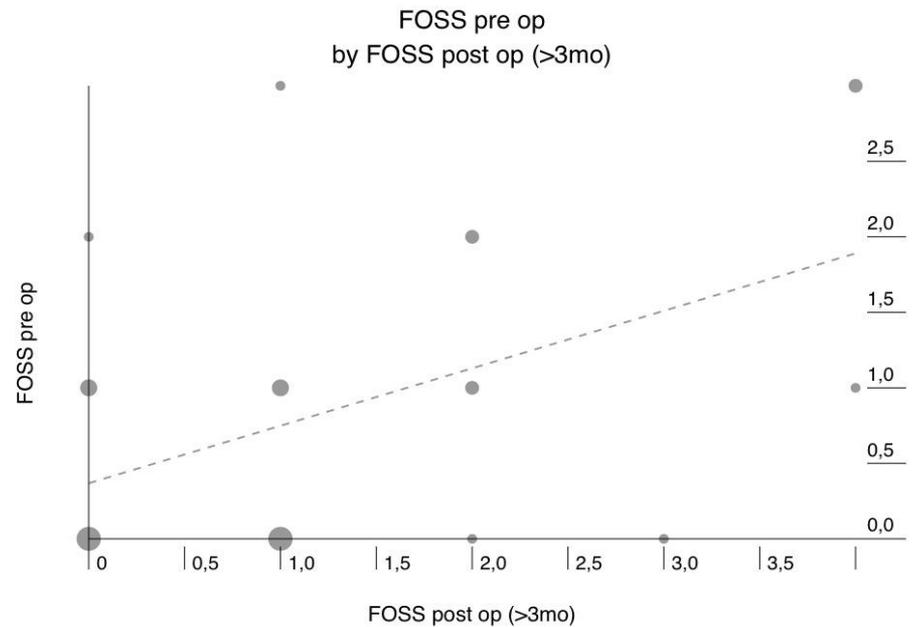
# Surveillance du rétablissement fonctionnelle: FOSS-score

- **stage 0**>normal function and asymptomatic
- **stage I**>normal function but with episodic or daily symptoms of dysphagia
- **stage II**>compensated abnormal function manifested by significant dietary modifications or prolonged mealtime (without weight loss or aspiration)
- **stage III**>decompensated abnormal function with weight loss of 10% or less of body weight over 6 months due to dysphagia, or daily cough, gagging, or aspiration during meals
- **stage IV**>severely decompensated abnormal function with weight loss of more than 10% of body weight over 6 months due to dysphagia, or severe aspiration with broncho-pulmonary complications, non-oral feeding recommended for most of nutrition
- **stage V**>non-oral feeding for all nutrition.

# Relation entre FOSS-score pré- et post-opératoire



P=0,06



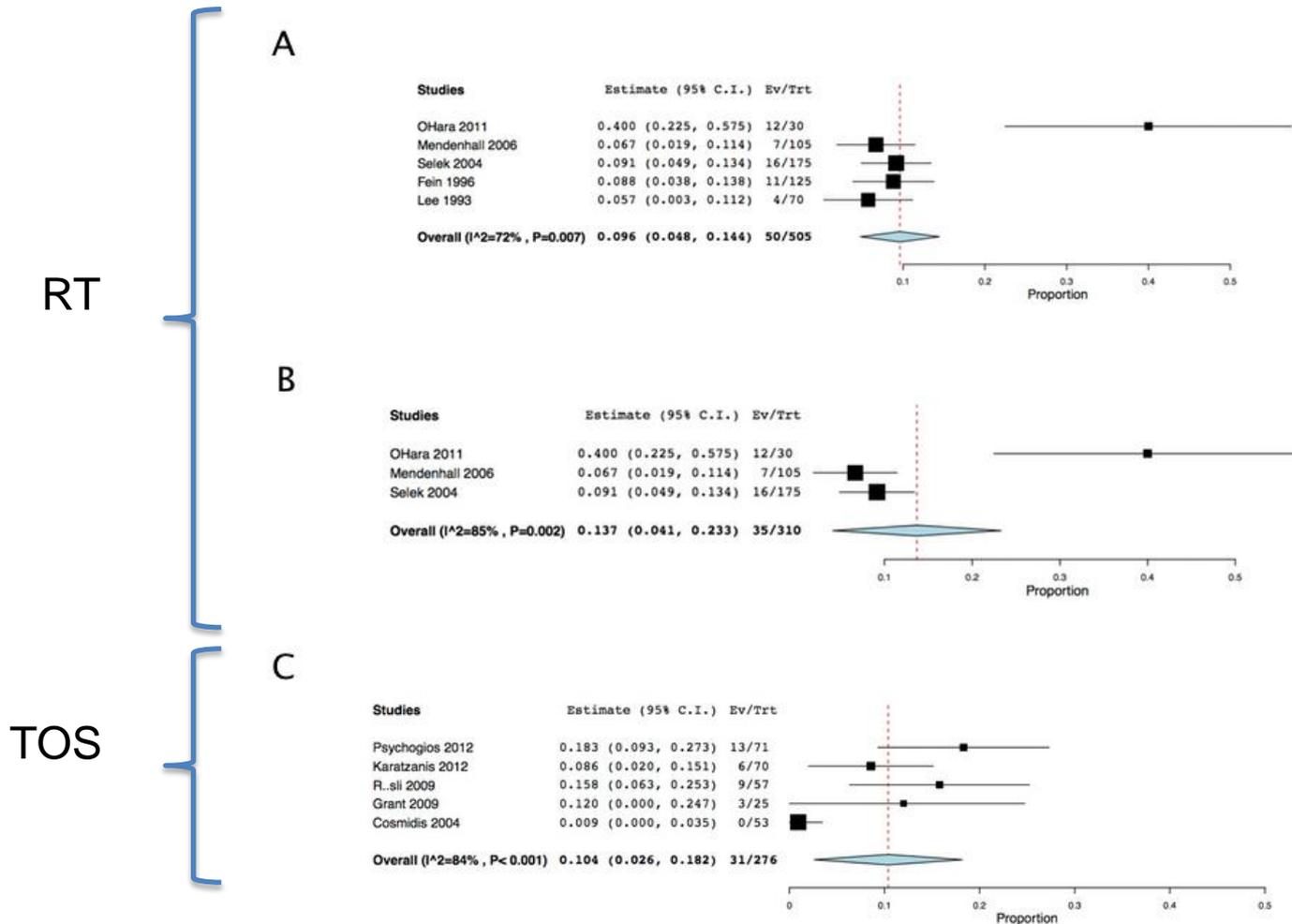
P<0,05

# “Ordered probit model” for “post-op FOSS score”

<b>variable</b>	<b>coefficient</b>	<b>std. error</b>
Past RXT (Y/N)		
N	0,	0,
Y	3,072	0,757
Radiation (Y/N)		
N	0,	0,
Y	1,335	0,513
Disease (Y/N)		
N	0,	0,
Y	1,625	0,733
<i>constant</i>	-0,421	0,348

# Perspectives

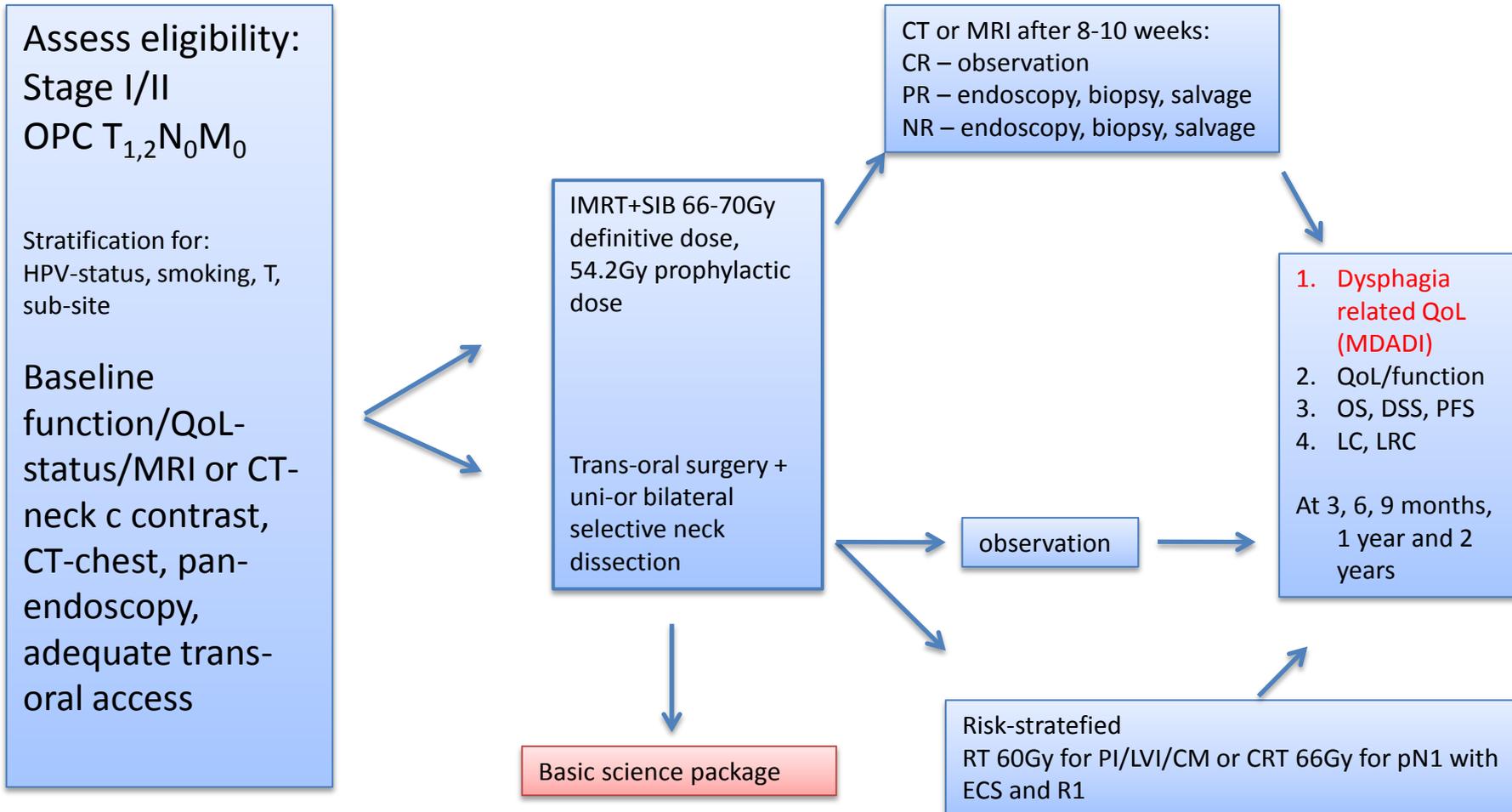
# TOS (TLM, conv. TOS) et RT ont le même taux de 5-y-DSS



“Best-of”: TOS versus RT in early stage OPC  
(HPV+/-) : **EORTC 1420**



**EORTC-GORTEC-SAKK-CRUK-(IAG-KHT) - Intergroup trial**



# Systeme « single-port »

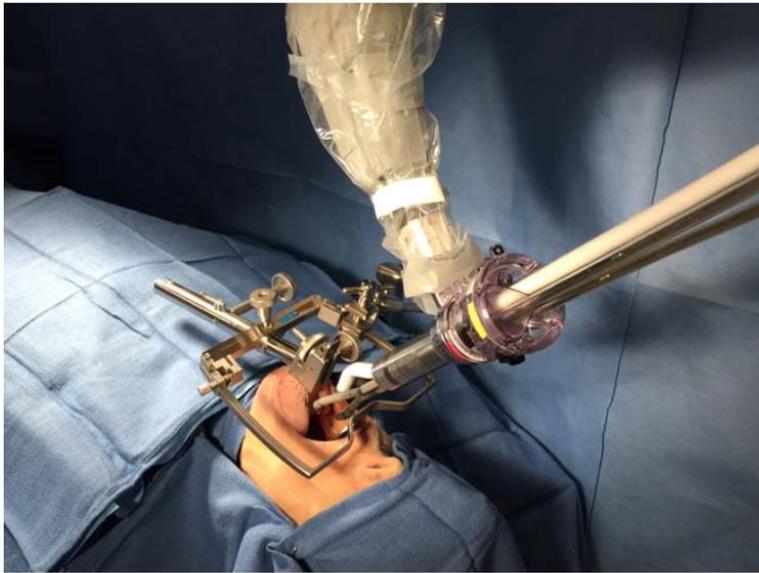


Fig. 3. A panoramic view of the entire setup from the perspective of the instrument arm showing the left-to-right access for the approach to the right lateral oropharynx.

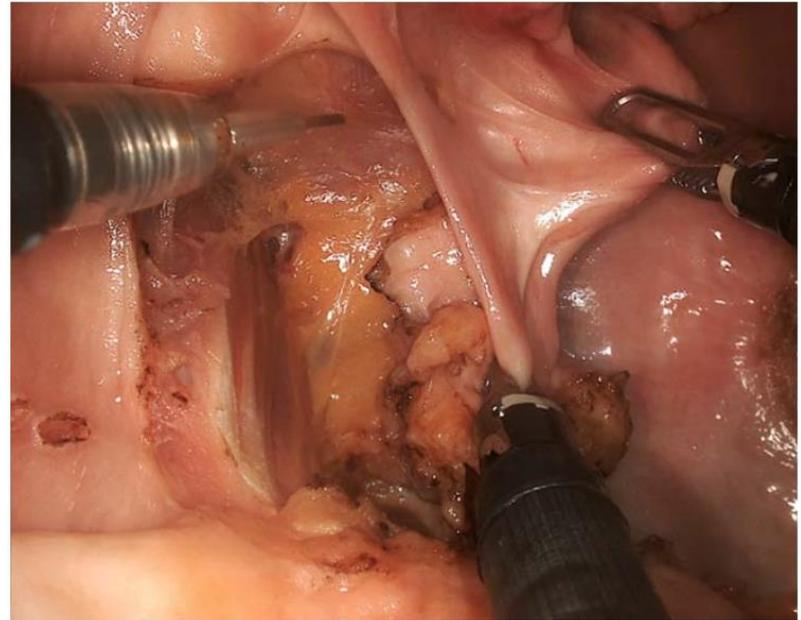


Fig. 4. Three instruments are shown from the next-generation, flexible robotic surgical system exposing the folds of the superficial posterior floor-of-mouth and the deeper glossopharyngeal sulcus and folds that are typically collapsed without a third arm providing countertraction.

- Merci pour votre attention

