ASSISTANCE PUBLIQUE HÔPITAUX DE PARIS

FACULTÉ DE MÉDECINE PARIS DESCARTES

Actualités « chirurgicales »

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Service d'Urologie

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HEGP APHP - Paris

1. Traitement des tumeurs localisées < 4 cm
    a. Chirurgie
    b. Thermoablation
    c. Nouvelles techniques
    d. Abstention / Surveillance

2. Traitement des tumeurs localisées > 4 cm

3. Néphrectomie en situation métastatique : où en est Carmena ?

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Est le traitement de référence

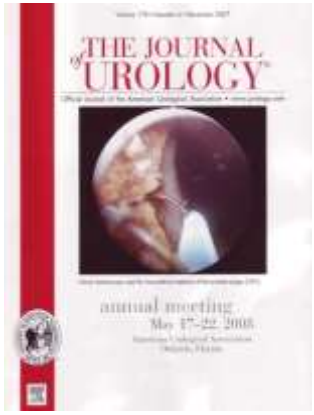
Survie sans progression

98% à 7 ans

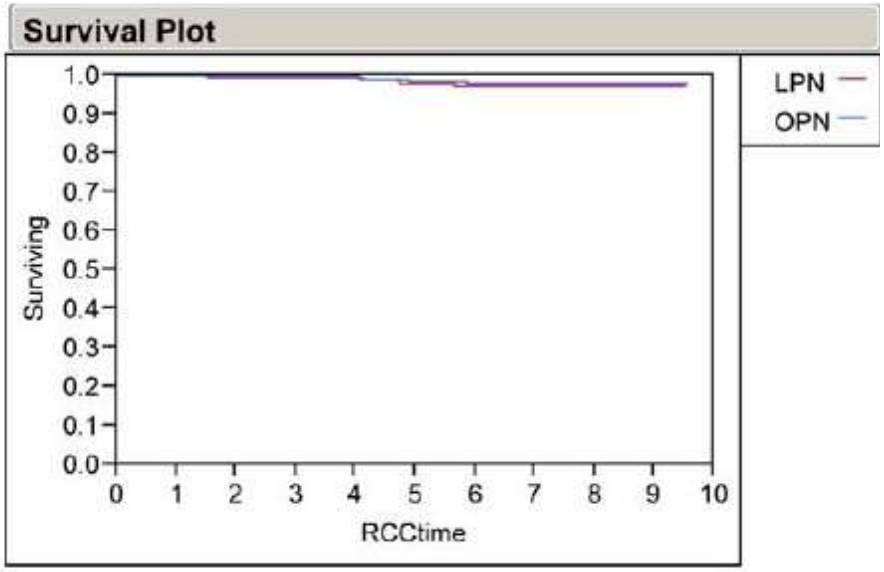
7-Year Oncological Outcomes After Laparoscopic and Open Partial Nephrectomy

Brian R. Lane*,† and Inderbir S. Gill‡,§

THE JOURNAL OF UROLOGY® Vol. 183, 473-479, February 2010



A



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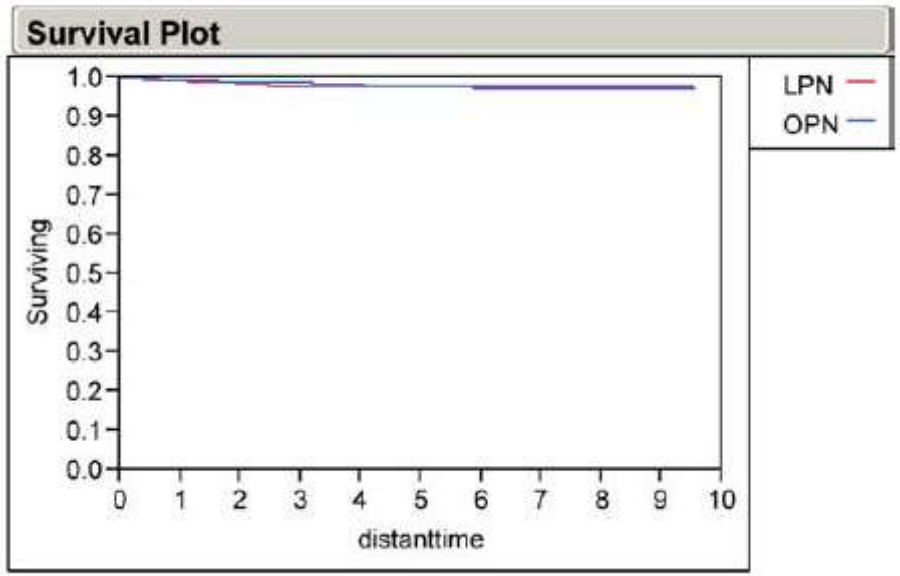


Kaplan-Meier estimates of cancer specific (*A*) and metastasis-free (*B*) survival after LPN and OPN.

Double défi

- Traiter la tumeur
- Préserver la fonction rénale

La consécration de la chirurgie conservatrice (= néphrectomie partielle = tumorectomie)

Chirurgie conservatrice : Quelle voie d'abord ?

- Chirurgie ouverte : référence
- Laparoscopie ou coelioscopie
- Chirurgie robotique de + en +

Robotique


PARIS MATCH
SYRIE
LES GAVROCHES D'ALEP
LES HÉRITIÈRES
Charlotte
le renouveau glamour de Monaco
MODE, FINANCE, SHOWBIZ
TOP Santé
DENTS BLANCHES
10 CLÉS POUR UNE RENTRÉE SANS STRESS!
Nouveau!!
LE RÉGIME 5:2
5 jours plaisir
2 jours régime
MAIGRIR
sans se priver
sans reprendre!
32 RECETTES PAS CHÈRES

Chronic kidney disease after nephrectomy in patients with renal cortical tumours: a retrospective cohort study

William C Huang, Andrew S Levey, Angel M Serio, Mark Snyder, Andrew J Vickers, Ganesh V Raj, Peter T Scardino, Paul Russo

Lancet Oncol 2006; 7: 735–40

26% pts (créat nle) sont IR avant chir

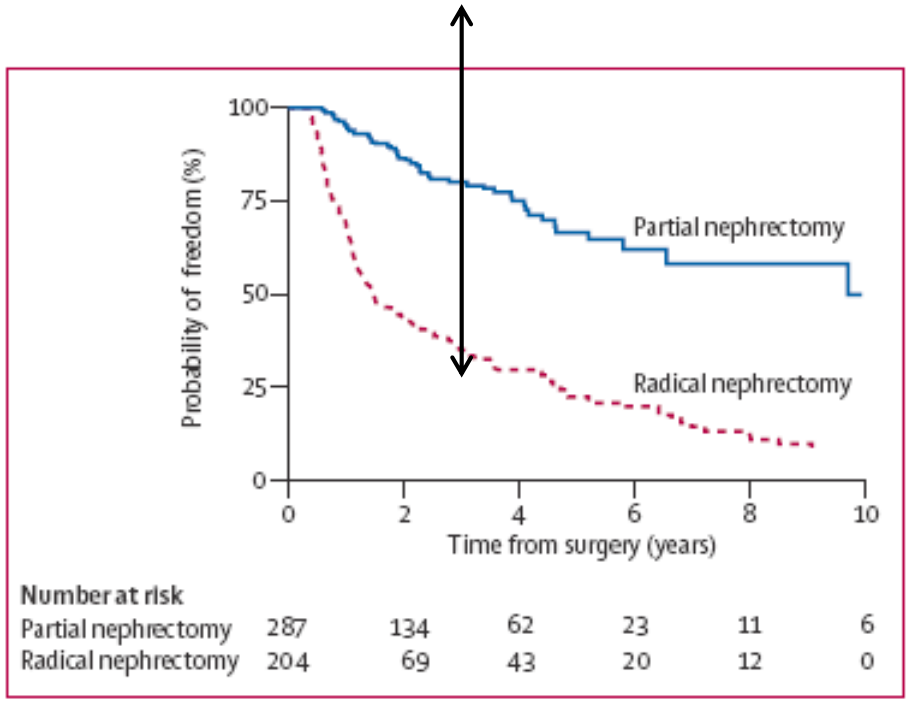


Figure 2: Probability of freedom from new onset of GFR lower than 60 mL/min per 1·72 m², by operation type

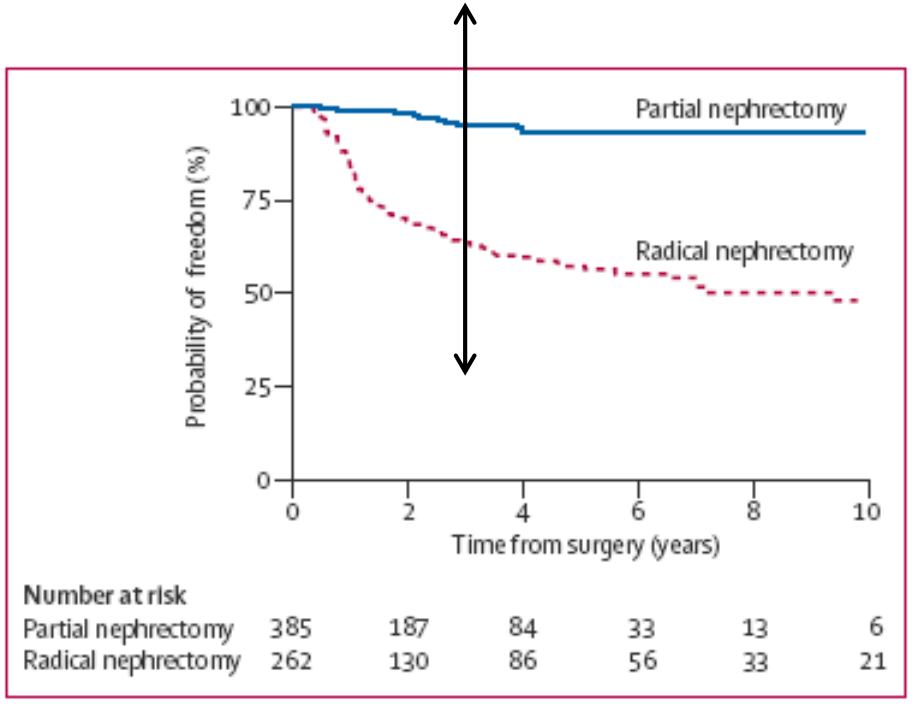
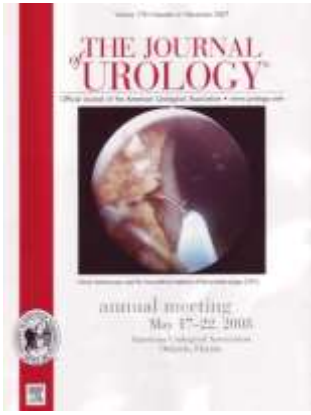


Figure 3: Probability of freedom from new onset of GFR lower than 45 mL/min per 1·72 m², by operation type

Nephrectomy Induced Chronic Renal Insufficiency is Associated With Increased Risk of Cardiovascular Death and Death From Any Cause in Patients With Localized cT1b Renal Masses

Christopher J. Weight,* Benjamin T. Larson,* Amr F. Fergany,*,† Tianming Gao,* Brian R. Lane,* Steven C. Campbell,‡ Jihad H. Kaouk,§ Eric A. Klein‖ and Andrew C. Novick¶

THE JOURNAL OF UROLOGY® Vol. 183, 1317-1323, April 2010



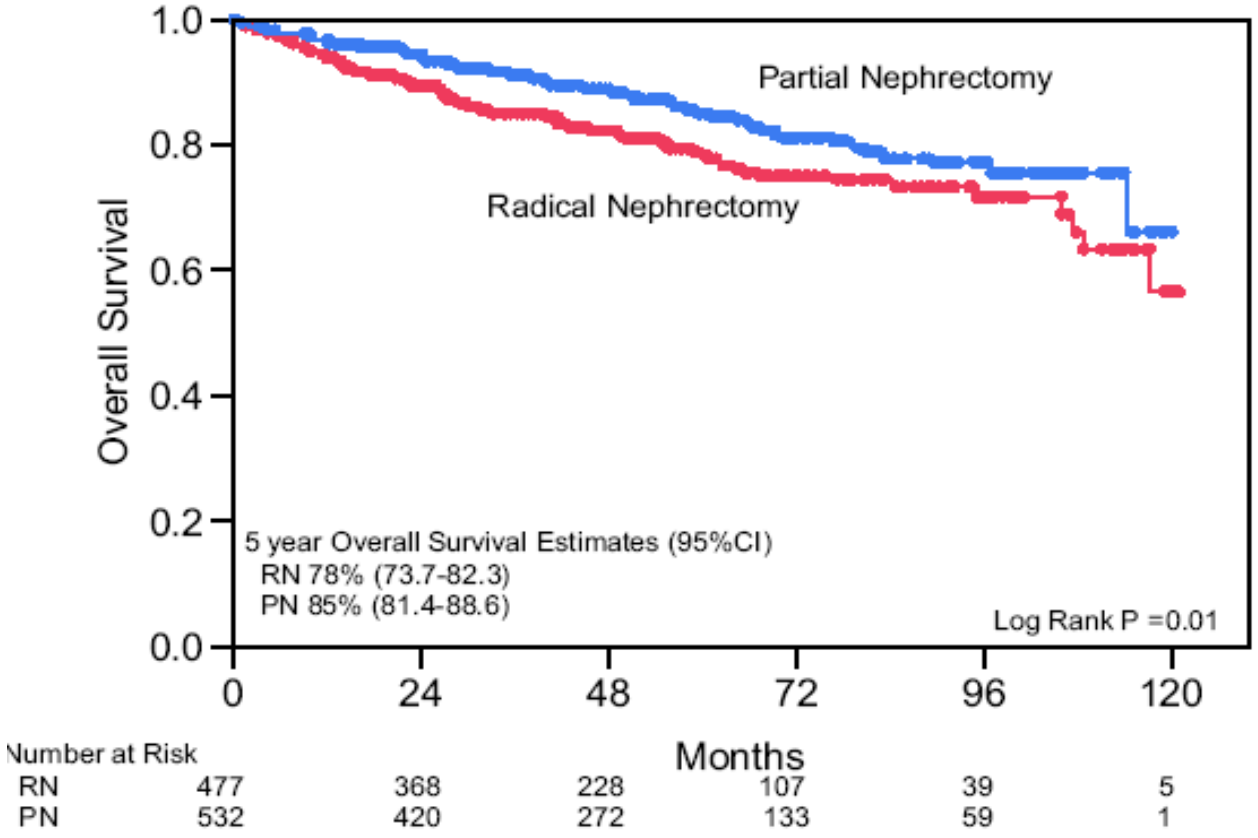


Figure 1. OS stratified according to treatment type for 1,004 patients undergoing extirpative surgery for cT1b renal masses.

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Techniques per-cutanées

Radiofrequence ablation (RFA)

- Ondes Electromagnetiques (500 kHz)
- Friction Ionique ↗ T° à 100 °C
- Coagulation et nécrose

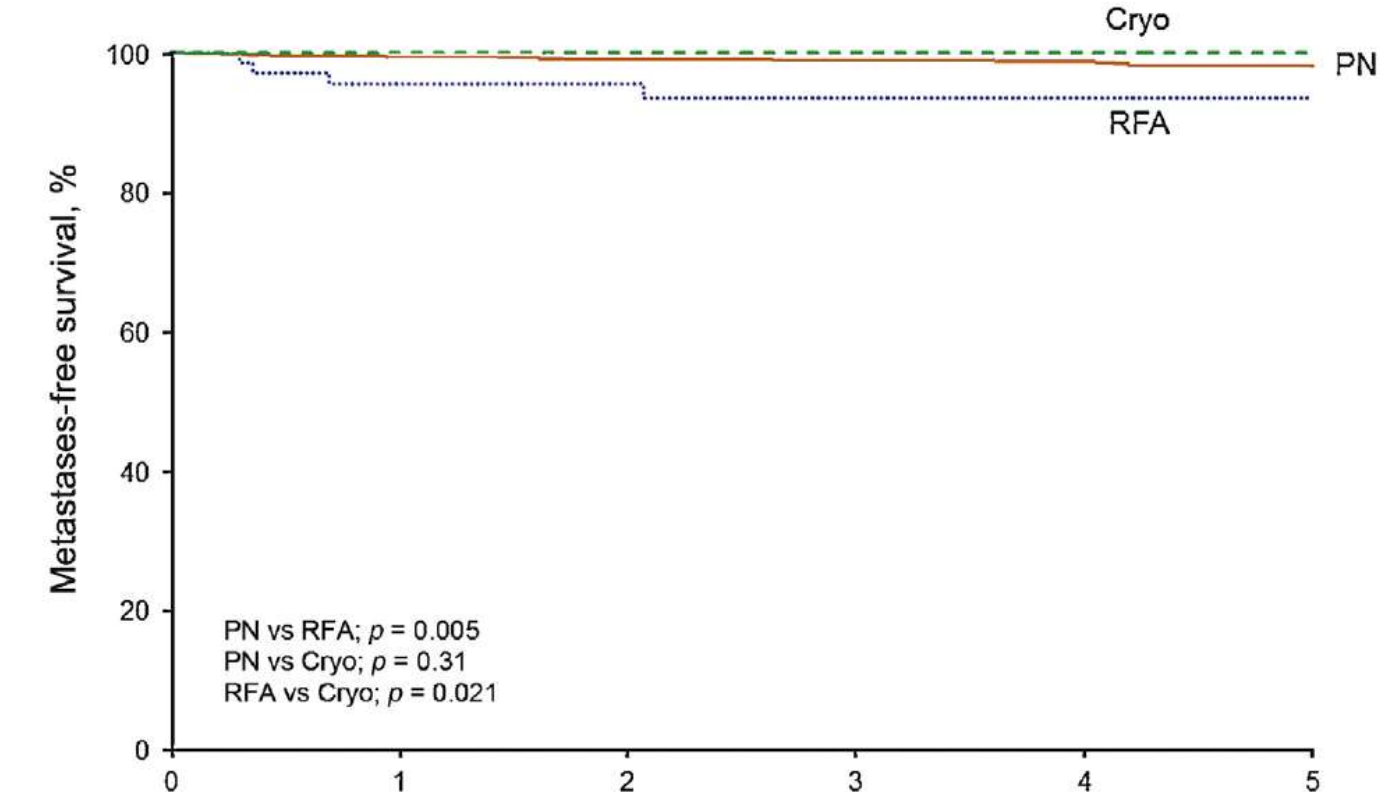
Cryoablation

- Source : argon ou azote liquide
- Dead T : - 40°C
- 2 phases : cristallisation et réchauffement
- Evaluation « ice ball » (MRI, TDM)

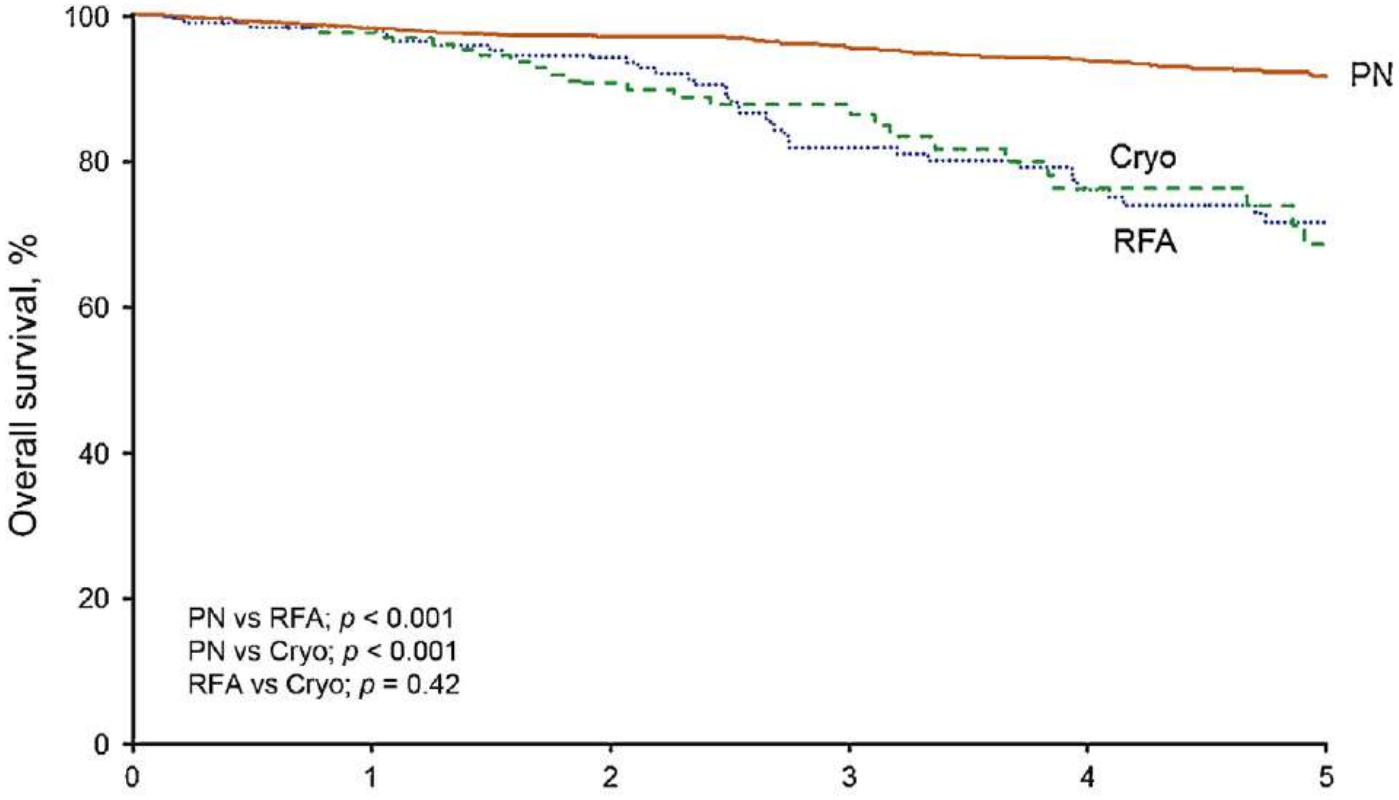
Comparison of Partial Nephrectomy and Percutaneous Ablation for cT1 Renal Masses

R. Houston Thompson [a,], Tom Atwell [b], Grant Schmit [b], Christine M. Lohse [c], A. Nicholas Kurup [b], Adam Weisbrod [b], Sarah P. Psutka [a], Suzanne B. Stewart [a], Matthew R. Callstrom [b], John C. Cheville [d], Stephen A. Boorjian [a], Bradley C. Leibovich [a]*

	PN	RFA	Cryo	p
Age	60.1	70.7	71.6	< 0.001
Histo				
Non connue	0	47 (26)	14 (7)	< 0.001
Benin	221 (21)	60 (33)	65 (35)	
RCC	836 (79)	73 (41)	108 (58)	
FU (an)	5.2	3.6	1.9	



No. at risk						
PN	836	799	752	640	527	424
RFA	73	58	48	33	25	17
Cryo	108	75	53	38	21	13



No. at risk						
PN	1057	1012	957	813	670	537
RFA	180	157	127	95	74	56
Cryo	187	135	93	64	41	24

Indications

- Patients > 70 ans
- VHL : 1ere procedure ou recidive ?
- Fonction renale altérée
- Co-morbidité importante
- Récidive locale après NP

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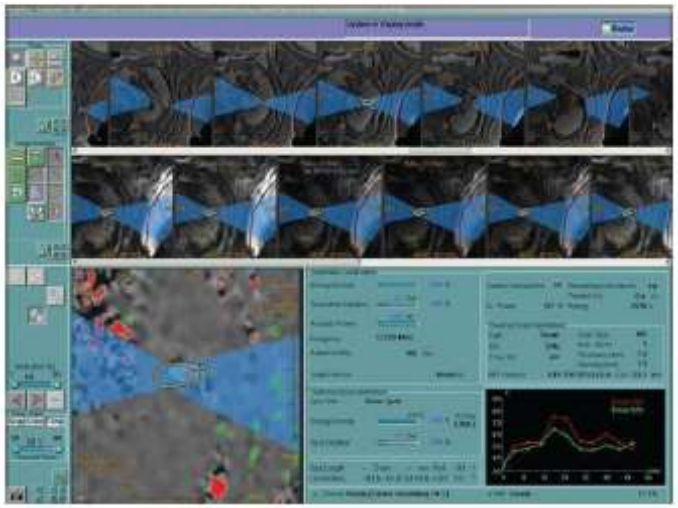
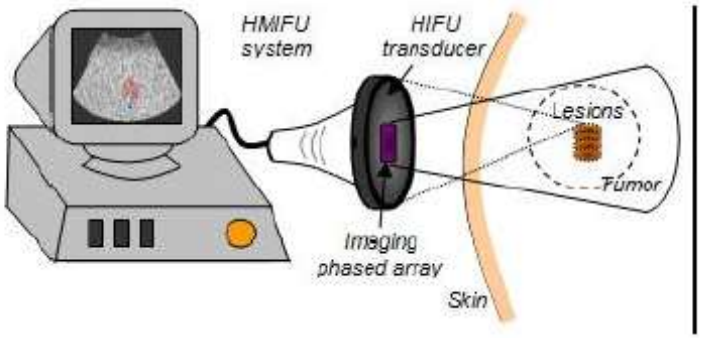
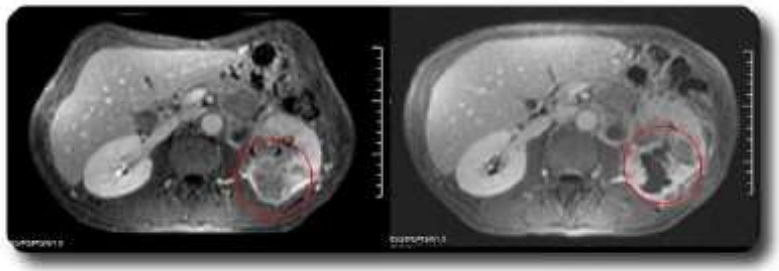
Techniques trans-cutanées

Ultrasons de haute intensité

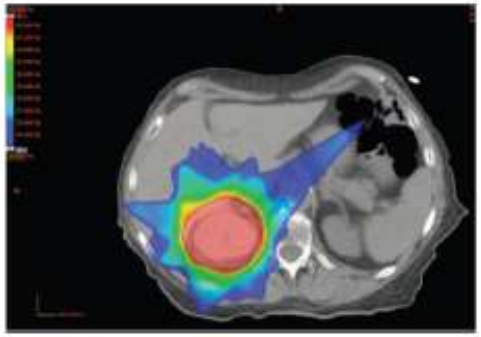






(Al-Bataineh, Cancer Treatment Reviews 2012)

Stereotaxie



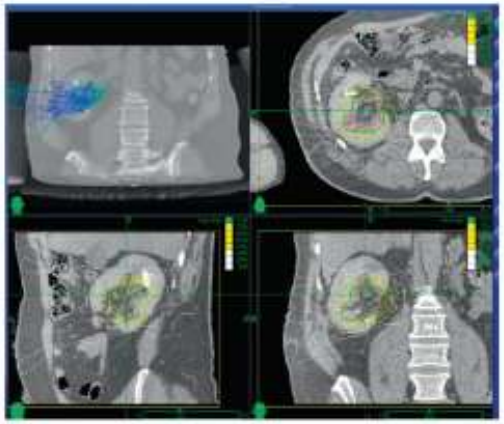


Figure 1. Planning SRS treatment with 19 Gy to 75th percentile in patient with 39 cm TCC.

FIG. 2. A fully awake patient vacuum immobilized in the Elekta BodyFix® system (Medical Intelligence, Schwabmünchen, Germany) at the Peter MacCallum Cancer Centre.

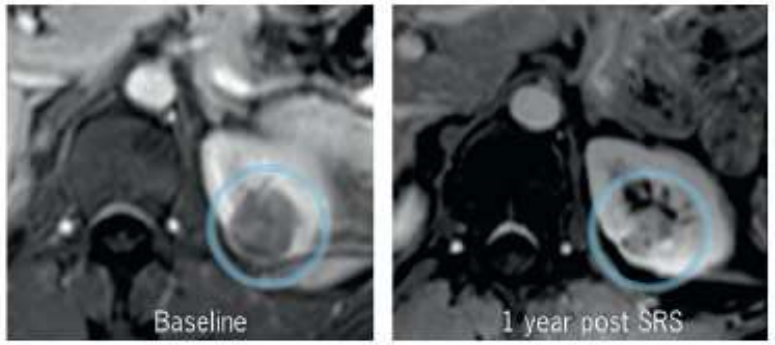
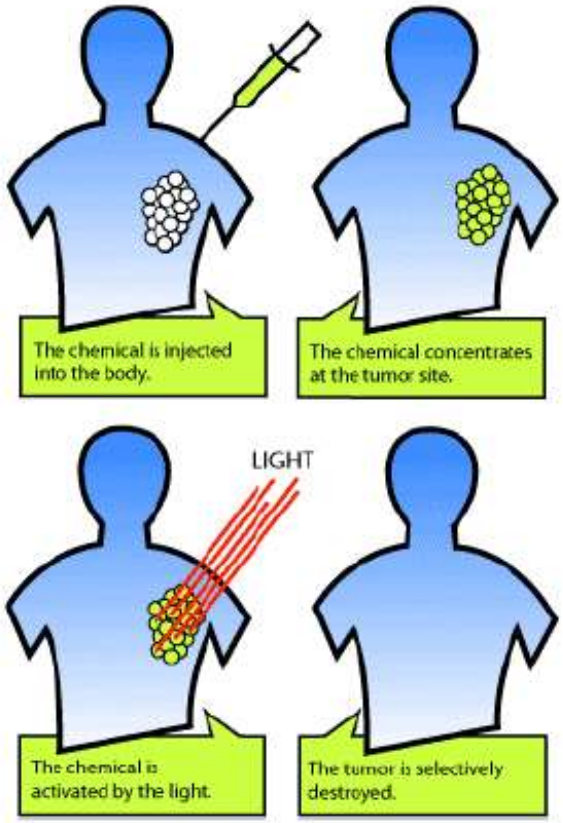
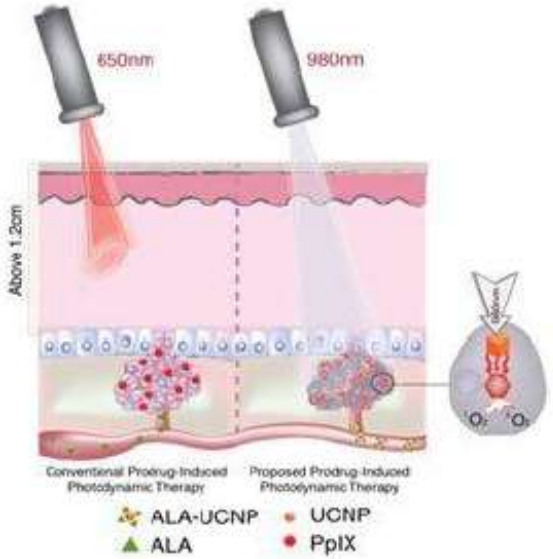


Figure 3. Clear cell RCC at baseline and 1 year after SRS in ASA® V case.

Siva, BJUInt 2012; Pham, IJROBP 2014; Staehler, JUrol 2015

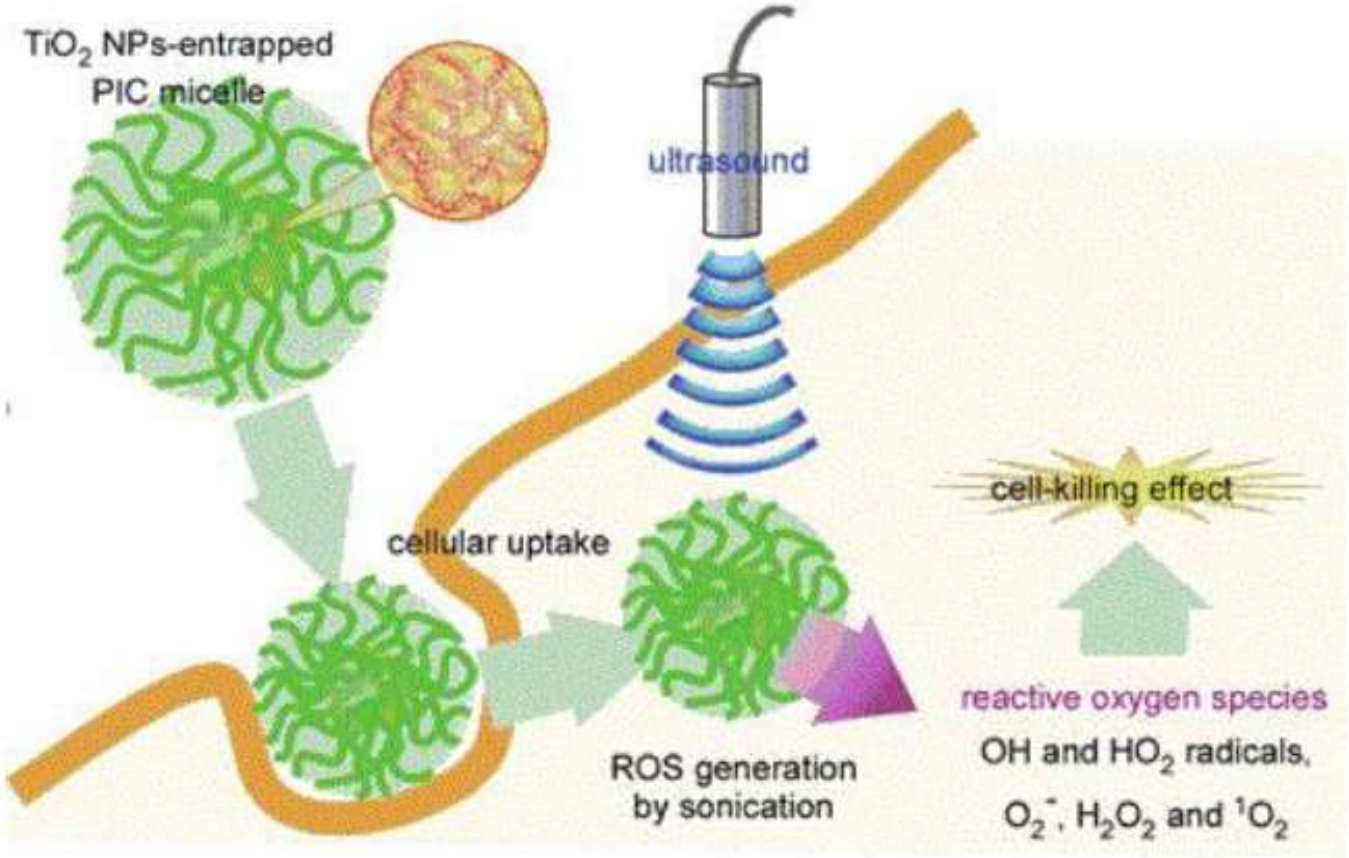
Thérapie photodynamique





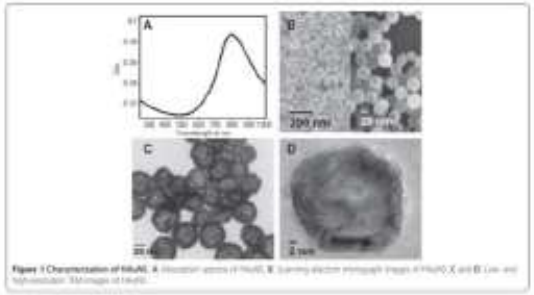
(Bozzini, Photodiagnosis and Photodynamic Therapy 2012)

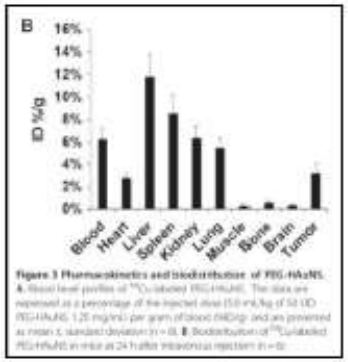
Thérapie sonodynamique



(Yumita, J of Pharmacy and Pharmacology 2004)

Nanoparticules





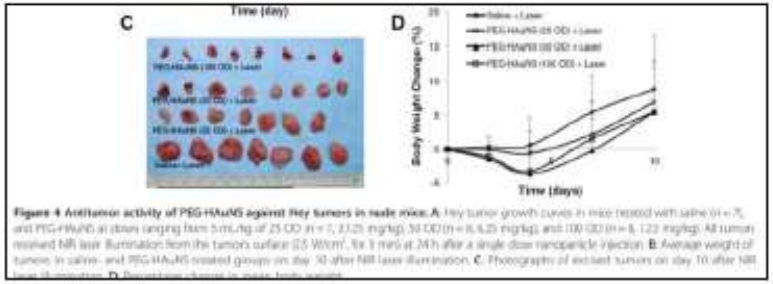


Table 1 Summary of current nanotechnology developments and limitations.

Application	Nanoparticles	Developments	Limitations
Imaging	Magnetic liposomes – superparamagnetic iron oxides (SPIO)/ultrasmall SPIO Quantum dots (QDs)	Nanoparticles significantly increase the sensitivity and specificity of current imaging methods. Flexible structure allows potential multifunctionality with therapeutic effects offering synergistic treatment.	QDs have potential for biotoxicity.
Thermal ablation	Gold nanoshells (GNs) Carbon nanotubes (CNTs)	Excitation by NIR laser or electromagnetic field creates hyperthermia and potential tumoricidal effects.	Gold has high production cost. Carbon lack of standardised production methods and have potential biotoxicity.
Gene therapy	Liposome	Nanoparticle vectors offer efficient cell entry, biocompatibility, unlimited DNA carry capacity, flexible construction, and potential cell targeting.	Nonspecific surface interactions inhibit uptake and increase clearance.
Drug delivery	Liposome and others	Nanoparticles provide flexible construction that can increase delivery efficacy, lower systemic toxicity, circumvent drug resistance mechanisms, and sustain therapeutic levels. Current research involves combining drug delivery with other arms of nanoparticle development for combined treatment.	Further research is required for delineating physiochemical parameters.

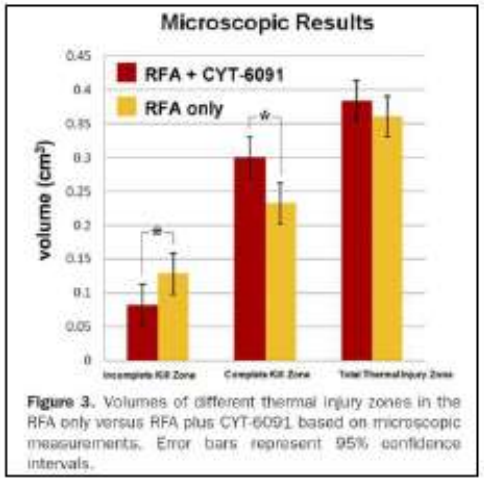


Figure 3. Volumes of different thermal injury zones in the RFA only versus RFA plus CYT-6091 based on microscopic measurements. Error bars represent 95% confidence intervals.

Brede, AdvChronicKidneyDis 2013; You, Particle and Fibre Tox 2014; Maddox, BJUInt 22014; Nardi Pedro, Urology 2010

Micro-ondes

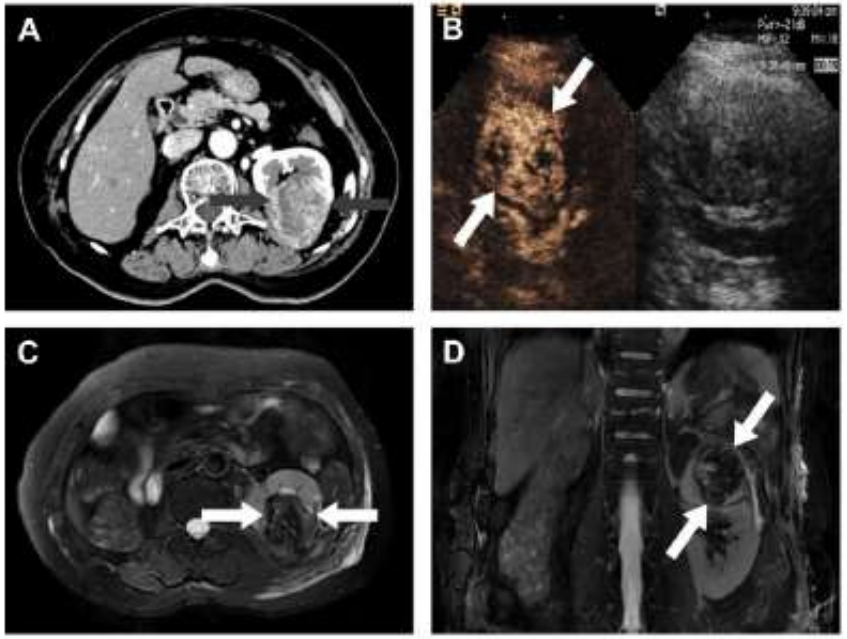


Figure 2. A 5.4 × 5.1 cm tumor lesion in a solitary kidney of a 66-year-old woman treated with microwave ablation. **(A)** Preablation enhanced-computed tomography image shows a heterogeneous hyperintense neoplasm (black arrow); **(B)** Contrast enhanced ultrasound shows the heterogeneous heperenhancement neoplasm adjacent to the renal pelvis with the patient in a lateral position (white arrow); **(C and D)** On the post-microwave ablation magnetic resonance image, no

(Lin, Urology 2014; Vrba, Bioelectrochemistry and Bioenergetics 1999)

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Comment choisir ?

Patient	âge, BMI, comorbidité (anticoag), critères onco-gériatrique
Rein	fonction (MDRD), graisse périrénale
Tumeur	taille, localisation, voie excrétrice, zone péritumorale
Chirurgien	expertise, conviction, « philosophie »

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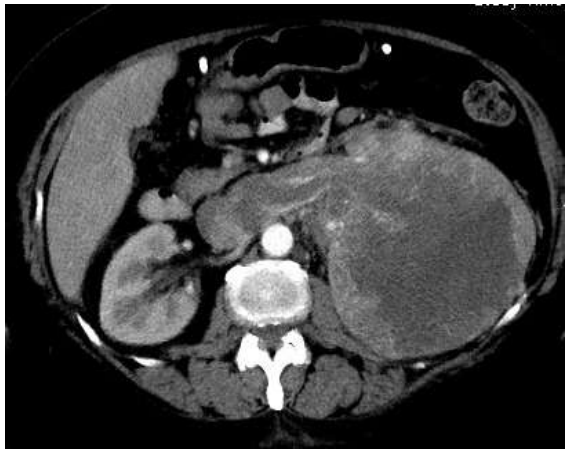
Chirurgie +++++

- Pas de place ACTUELLEMENT pour les antiangiogéniques
- Voie d'abord : Laparoscopie +++++
- Open réservée aux très grosses tumeurs ou aux tumeurs loalement avancées (et encore ….)



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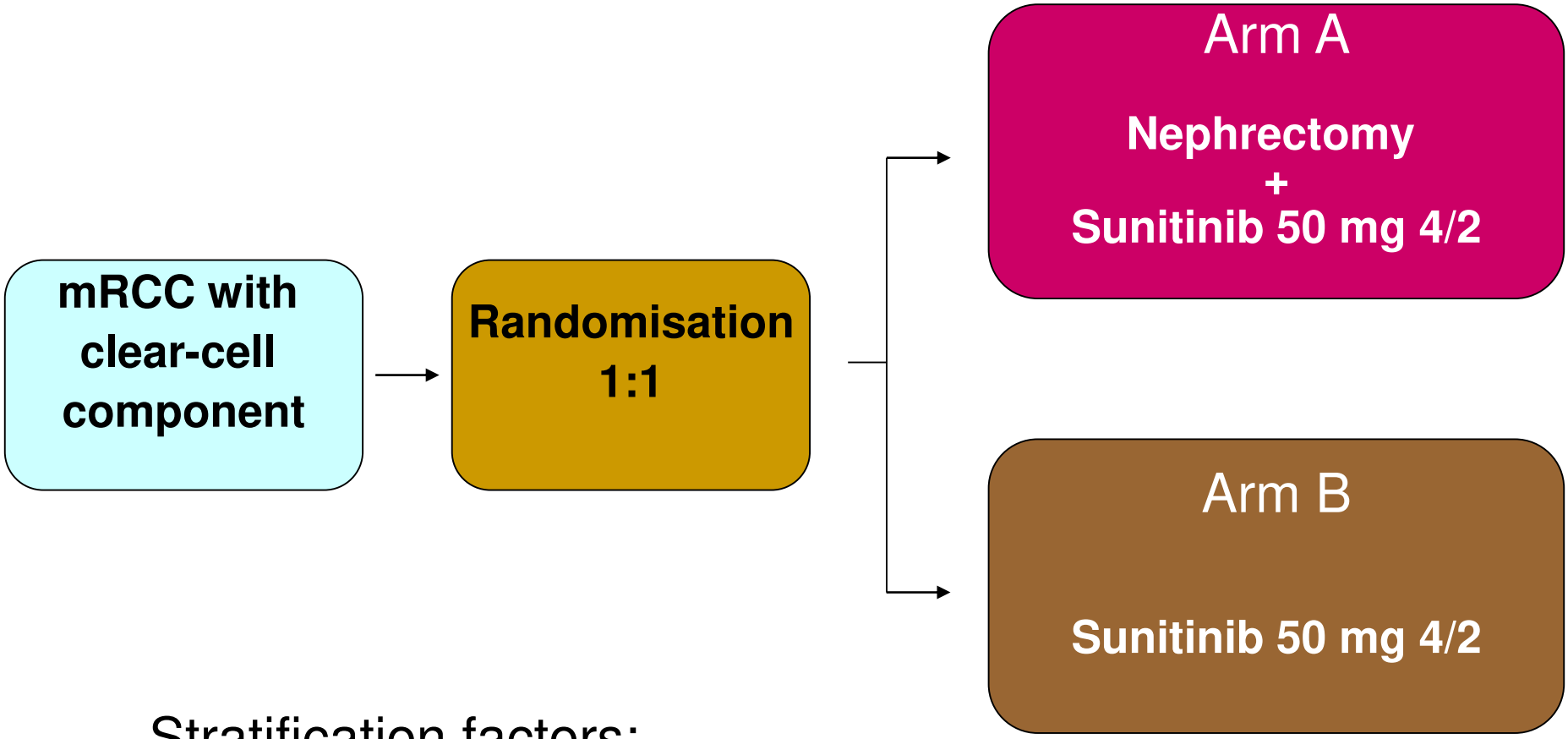
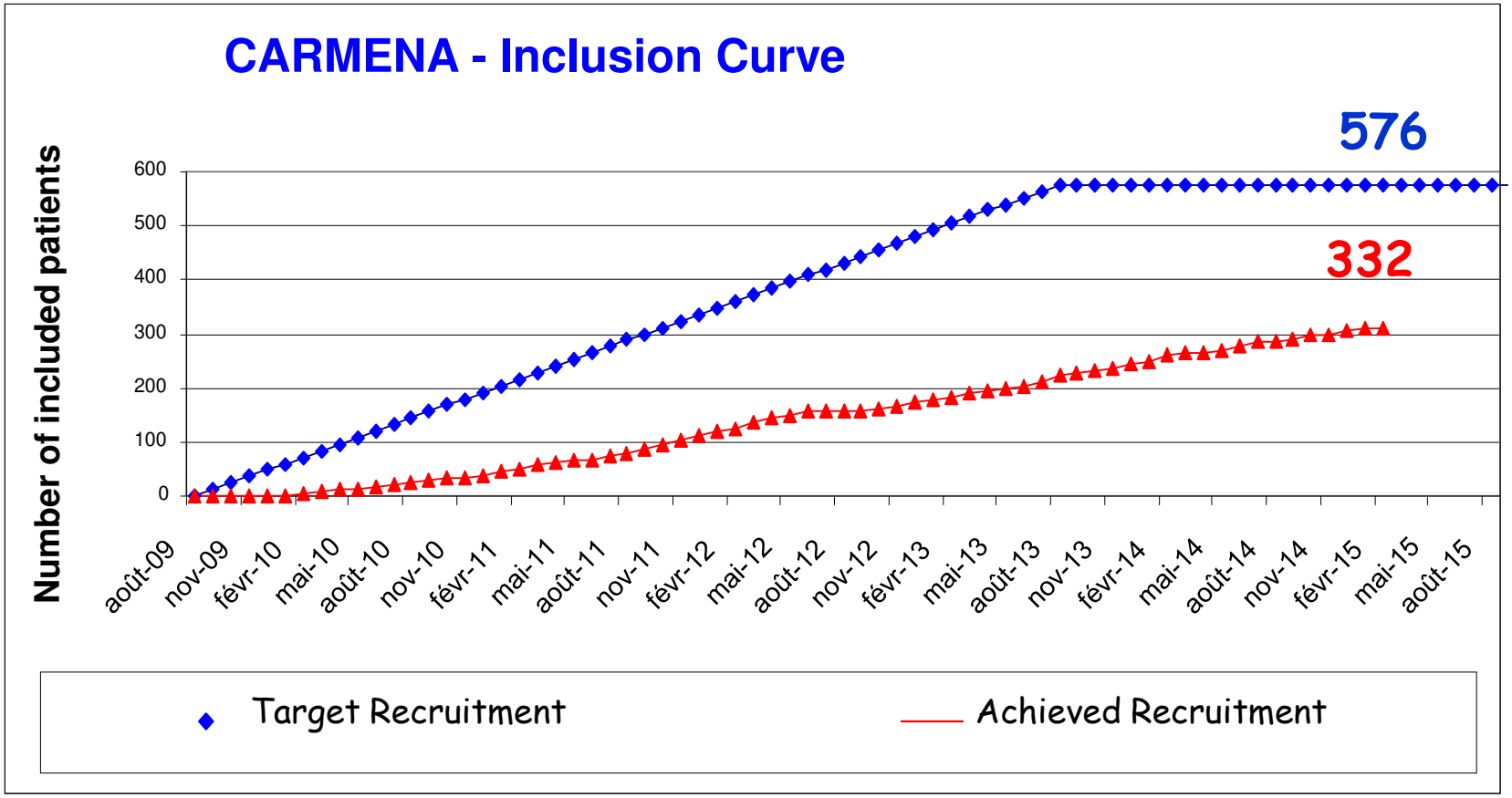
CARMENA design



Stratification factors:

- MSKCC score
- Country

CARMENA Inclusion



Conclusion

- Tumeurs < 4 cm
  - chirurgie – thermoablation - Stéreotaxie (?)
  - Nouvelles techno expérimentales
- Tumeurs > 4 cm : CHIRURGIE
- Tumeurs M+ : Carmena en attente