



SIU **UPDATES**

ASCO GU

ASCO GENITOURINARY CANCER SYMPOSIUM

NEW PERSPECTIVES IN THE MANAGEMENT OF SMALL RENAL MASSES

Alessandro Antonelli

UO Urologia - ASST Spedali Civili di Brescia

LITERATURE OVERVIEW 2018

Selection Criteria

- Publication year 2018
- Already cited
- Impact factor
- Clinical impact

LITERATURE OVERVIEW 2018

TOPIC #1

ROLE OF RENAL FUNCTION ON OVERALL SURVIVAL

Predictors of Long-Term Survival after Renal Cancer Surgery

Joseph Zabell, Sevag Demirjian, Brian R. Lane, Ithaar H. Derweesh, Sudhir Isharwal, Chalairat Suk-Ouichai, Jitao Wu, Diego Aguilar Palacios and Steven C. Campbell*

From the Glickman Urological and Kidney Institute, Cleveland Clinic (JZ, SD, SI, CS-O, JW, DAP, SCC), Cleveland, Ohio, Departments of Urology, Spectrum Health Medical Group, Michigan State University (BRL), Grand Rapids, Michigan, University of California-San Diego Health System (IHD), San Diego, California, and Affiliated Yantai Yuhuangding Hospital of Qingdao University (JW), Yantai, Shandong, China, and Division of Urology, Department of Surgery, Siriraj Hospital, Mahidol University (CS-O), Bangkok, Thailand

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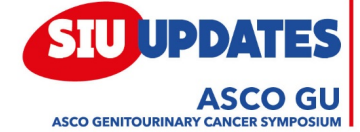
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Materials&Methods

- 1997-2008
- 4,283 patients
- RN 46%, PN 54% (out of models)
- Outcomes
 - 5 yrs onset of CKD
 - 10 yrs nonrenal cancer related mortality

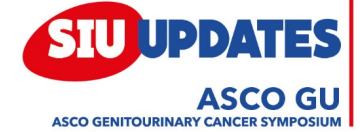
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Results&Conclusions

- Baseline GFR and GFR loss predict the risk of CKD
- Baseline GFR and age - not GFR loss - predict nonrenal cancer mortality

TOPIC #1

ROLE OF RENAL FUNCTION ON OVERALL SURVIVAL

Radical versus partial nephrectomy, chronic kidney disease progression and mortality in US veterans

Elani Streja¹, Kamyar Kalantar-Zadeh^{1,2}, Miklos Z. Molnar³, Jaime Landman⁴, Onyebuchi A. Arah⁵ and Csaba P. Kovesdy^{3,6}

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Radical versus partial nephrectomy, chronic kidney disease progression and mortality in US veterans

Elani Streja¹, Kamyar Kalantar-Zadeh^{1,2}, Miklos Z. Molnar³, Jaime Landman⁴, Onyebuchi A. Arah⁵ and Csaba P. Kovesdy^{3,6}

Materials&Methods

- 2004-2013
- 7,073 patients
- PN vs RN (propensity-score match pairing)
- Outcomes
 - CKD onset
 - Competing-risk overall survival

Radical versus partial nephrectomy, chronic kidney disease progression and mortality in US veterans

Elani Streja¹, Kamyar Kalantar-Zadeh^{1,2}, Miklos Z. Molnar³, Jaime Landman⁴, Onyebuchi A. Arah⁵ and Csaba P. Kovesdy^{3,6}

Results&Conclusions

- PN is associated with a significantly lower relative risk of incident CKD>3b
- PN has a reduced risk of mortality (HR 0.55)
- Lower baseline and greater decrease in eGFR are associated with worse mortality

Role of Clinical and Surgical Factors for the Prediction of Immediate, Early and Late Functional Results, and its Relationship with Cardiovascular Outcome after Partial Nephrectomy: Results from the Prospective Multicenter RECORD 1 Project

Alessandro Antonelli,* Andrea Mari,* Nicola Longo, Giacomo Novara, Francesco Porpiglia, Riccardo Schiavina, Vincenzo Ficarra, Marco Carini and Andrea Minervini†

Contributors: Daniele Amparore, Walter Artibani, Riccardo Bertolo, Giampaolo Bianchi, Aldo Massimo Bocciardi, Marco Borghesi, Eugenio Brunocilla, Riccardo Campi, Andrea Chindemi, Mario Falsaperla, Cristian Fiori, Maria Furlan, Fernando Fusco, Saverio Giancane, Vincenzo Li Marzi, Vincenzo Mirone, Giuseppe Morgia, Bernardo Rocco, Bruno Rovereto, Sergio Serni, Claudio Simeone, Riccardo Tellini, Carlo Terrone, Paolo Verze, Alessandro Volpe and Filiberto Zattoni.

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Materials&Methods

- 2009-2012 - RECORd1
- 769 PNs
- Outcomes
 - immediate, early and late $\Delta eGFR > 25\%$
 - CV events

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Results&Conclusions

- Surgical factors are related only to immediate $\Delta eGFR > 25\%$
- Patient's factors both to early and late $\Delta eGFR > 25\%$
- New baseline eGFR is related to new CV events (11%)

LITERATURE OVERVIEW 2018

TOPIC #2

SURGICAL PLANNING AND IMPROVEMENT OF OUTCOMES

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Surgery in Motion

Hyperaccuracy Three-dimensional Reconstruction Is Able to Maximize the Efficacy of Selective Clamping During Robot-assisted Partial Nephrectomy for Complex Renal Masses

Francesco Porpiglia^{}, Cristian Fiori, Enrico Checcucci, Daniele Amparore, Riccardo Bertolo*

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TOPIC #2

SURGICAL PLANNING AND IMPROVEMENT OF OUTCOMES

Hyperaccuracy Three-dimensional Reconstruction Is Able to Maximize the Efficacy of Selective Clamping During Robot-assisted Partial Nephrectomy for Complex Renal Masses

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Materials&Methods

- 2016-2017
- 31 PN without vs 21 with HA3D
- Outcomes
 - prediction of intra-operative strategy

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Results&Conclusions

- No HA3D is related to
 - Higher rate of global ischemia (80.6% vs 23.8%)
 - Poorer prediction of intraoperative strategy (90.5% vs 38.7%)
 - Higher rate of opening of the collecting system (41.9% vs 14.3%)

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Platinum Priority – Kidney Cancer

Editorial by Paras H. Shah, Bradley C. Leibovich and Timothy D. Lyon on pp. 60–61 of this issue

Intravenous Mannitol Versus Placebo During Partial Nephrectomy in Patients with Normal Kidney Function: A Double-blind, Clinically-integrated, Randomized Trial

Massimiliano Spaliviero^{a,†}, Nicholas E. Power^{b,†}, Katie S. Murray^a, Daniel D. Sjoberg^c,
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TOPIC #2

SURGICAL PLANNING AND IMPROVEMENT OF OUTCOMES

Intravenous Mannitol Versus Placebo During Partial Nephrectomy in Patients with Normal Kidney Function: A Double-blind, Clinically-integrated, Randomized Trial

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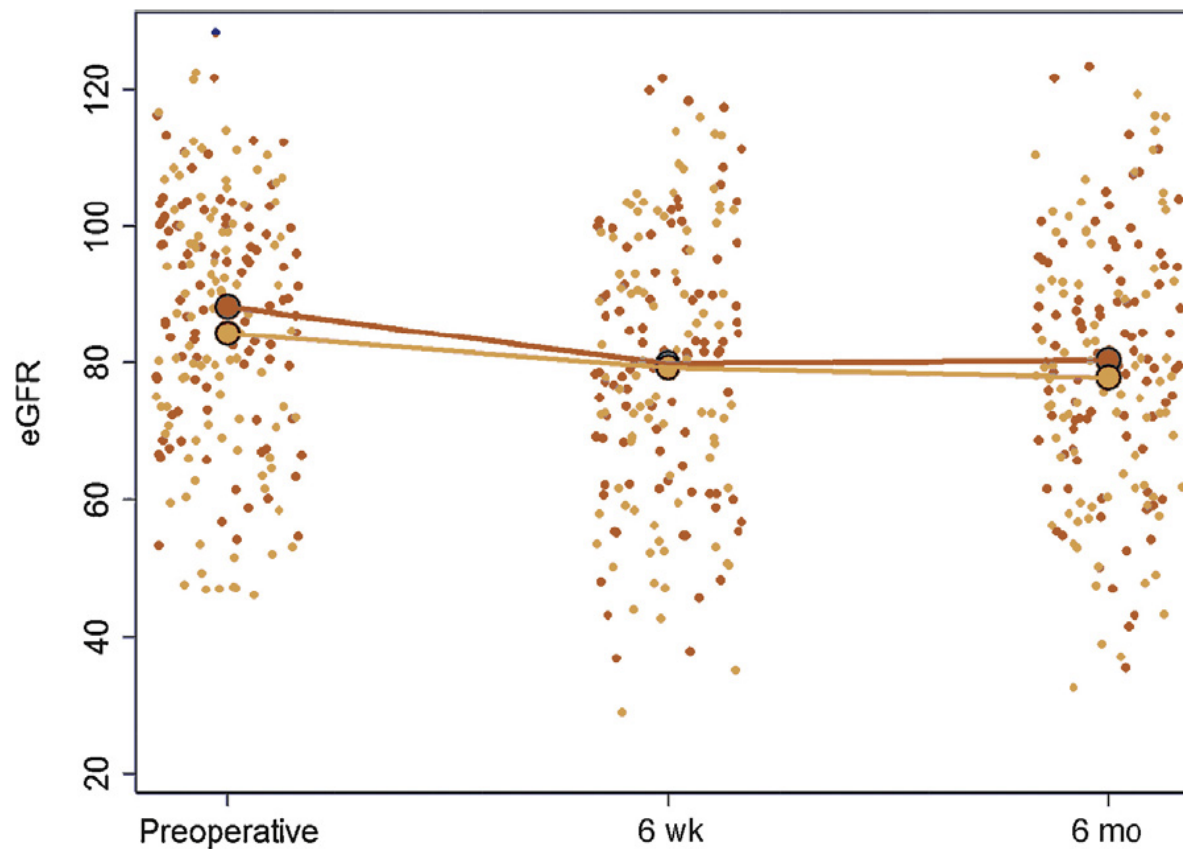
Materials&Methods

- 2012-2015
- 199 patients
- eGFR>45 ml/min, PN
- Mannitol 12.5g vs Placebo
- Outcomes
 - 6 mos difference in eGFR

Intravenous Mannitol Versus Placebo During Partial Nephrectomy in Patients with Normal Kidney Function: A Double-blind, Clinically-integrated, Randomized Trial

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TOPIC #2

SURGICAL PLANNING AND IMPROVEMENT OF OUTCOMES

LITERATURE OVERVIEW 2018

TOPIC #3

ACTIVE SURVEILLANCE

Growth Kinetics of Small Renal Masses on Active Surveillance: Variability and Results from the DISSRM Registry

Akachimere C. Uzosike,* Hiten D. Patel,*† Ridwan Alam, Zeyad R. Schwen, Mohit Gupta, Michael A. Gorin, Michael H. Johnson, Heather Gausepohl, Mark F. Riffon, Bruce J. Trock, Peter Chang, Andrew A. Wagner, James M. McKiernan, Mohamad E. Allaf and Phillip M. Pierorazio

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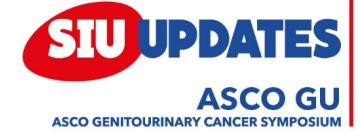
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Materials&Methods

- 271 patients in AS (standardized protocol, prospective cohort)
- 85% >2 radiological assessments
- Outcome
 - overall GR (average of interval GRs)
 - progression, histopathology (33 patients), OS

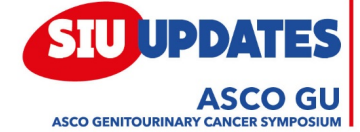
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Results&Conclusions

- No M+ or RCC related deaths
- 38/271 crossovers to intervention
- No difference in GR of benign vs malignant tumors
- Larger variability in GR during the first months of AS

TOPIC #3

ACTIVE SURVEILLANCE

Diagnostic Performance and Inter-Reader Agreement of a Standardized MRI Approach for Prediction of Small Renal Mass Histology

Fernando U. Kay¹, Noah E. Canvasser², Yin Xi¹, Daniella Pinho¹, Daniel Costa¹, Alberto Diaz de Leon¹, Gaurav Khatri¹, John R. Leyendecker¹, Takeshi Yokoo¹, Aaron H. Lay², Nicholas Kavoussi², Ersin Koseoglu², Jeffrey A. Cadeddu^{1,2}, and Ivan Pedrosa^{1,3,*}

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Diagnostic Performance and Inter-Reader Agreement of a Standardized MRI Approach for Prediction of Small Renal Mass Histology

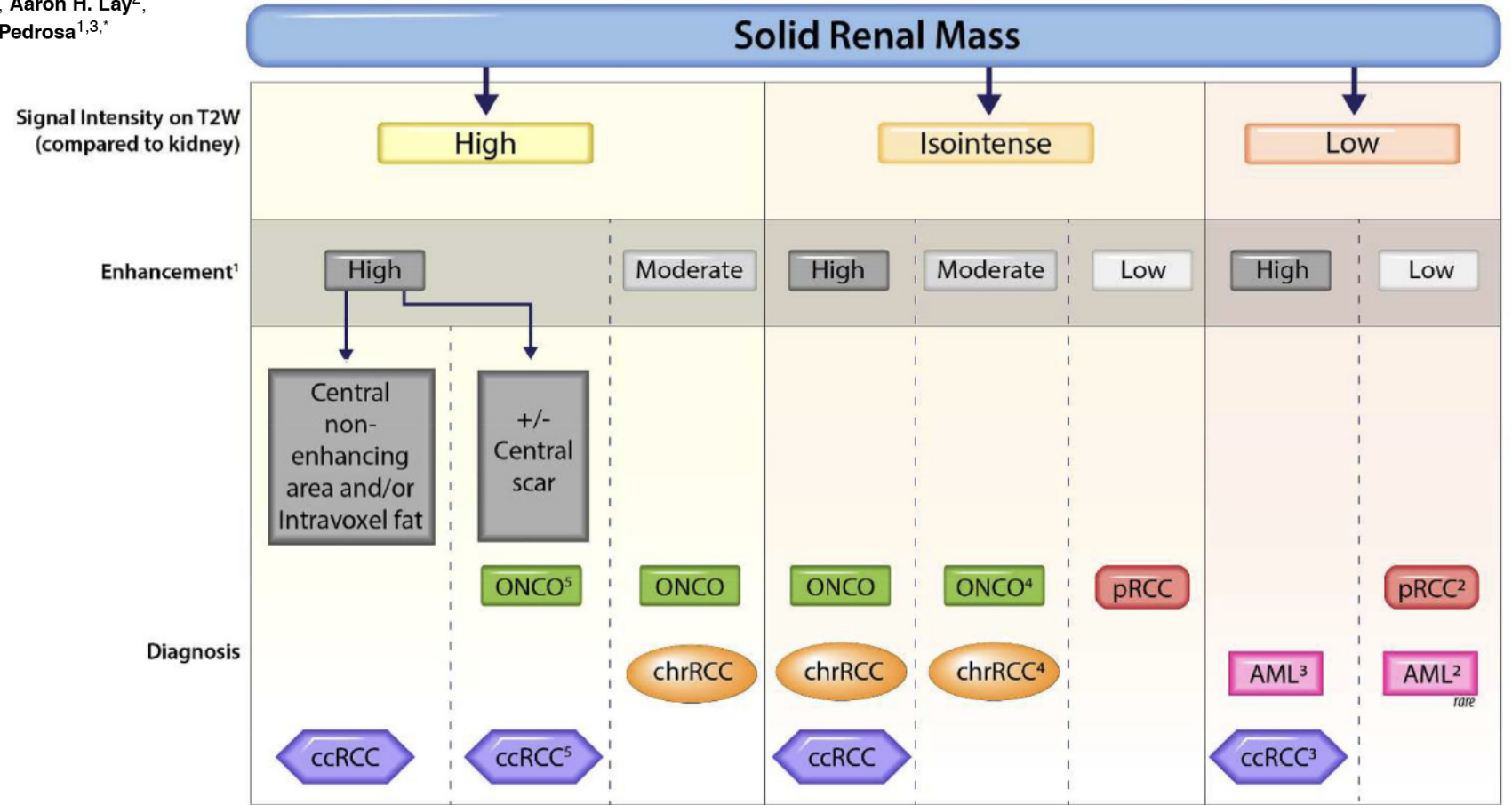
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Materials&Methods

- 2011-2015
- 103 SRMs
- 7 radiologists
- Standardized MRI protocol
- Outcome
 - inter-observer agreement
 - predictors of final pathology

Diagnostic Performance and Inter-Reader Agreement of a Standardized MRI Approach for Prediction of Small Renal Mass Histology

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Other: e.g. Adenoma, Leiomyoma, Lymphoma

TOPIC #3

ACTIVE SURVEILLANCE

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Results&Conclusions

- Moderate to substantial inter-reader agreement for the diagnosis of ccRCC and pRCC ($\kappa=0.58$ and $\kappa=0.73$).
- Sensitivity and specificity:ccRCC 85% and 76%, pRCC 80% and 95%



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Urologic Oncology: Seminars and Original Investigations ■ (2017) ■■■–■■■

 UROLOGIC

 ONCOLOGY

Original article

Characterizing recurrent and lethal small renal masses in clear cell renal cell carcinoma using recurrent somatic mutations

Brandon J. Manley, M.D.^a, Ed Reznik, Ph.D.^b, Mazyar Ghanaat, M.D.^a, Mahyar Kashan, B.A.^b,
 Maria F. Becerra, M.D.^b, Jozefina Casuscelli, M.D.^c, Daniel Tennenbaum, B.S.^a,
 Almedina Redzematovic, M.S.^d, Maria I. Carlo, M.D.^d, Yusuke Sato, M.D.^e,
 Maria Arcila, M.D.^f, Martin H. Voss, M.D.^d, Darren R. Feldman, M.D.^d,
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TOPIC #3

ACTIVE SURVEILLANCE



Original article

Characterizing recurrent and lethal small renal masses in clear cell renal cell carcinoma using recurrent somatic mutations

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Materials&Methods

- 203 patients with SRM (ccRCC)
- Genome sequencing on surgical specimen
- Outcome - prognostic role of most frequent gene mutations

Original article

Characterizing recurrent and lethal small renal masses in clear cell renal cell carcinoma using recurrent somatic mutations

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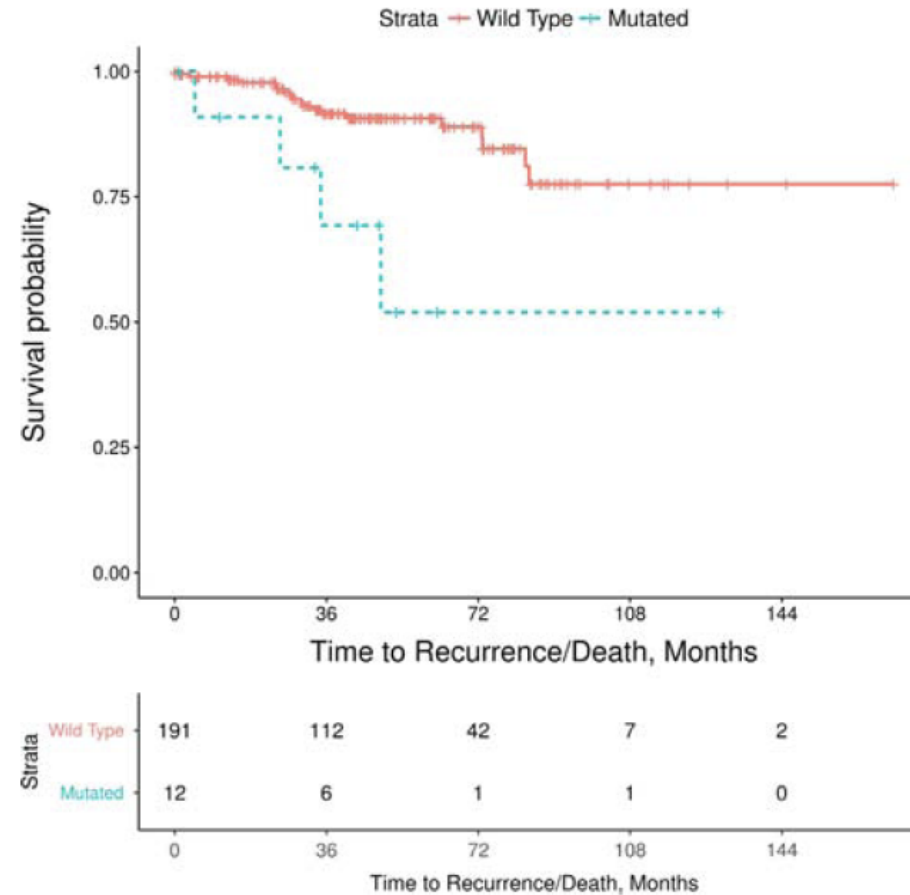


Fig. 2. Kaplan-Meier survival plot comparing risk of recurrence or death of disease between patients with wild type and *KDM5C* mutations in their primary tumor. (Color version of the figure available online.)



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ASCO GENITOURINARY CANCER SYMPOSIUM