62nd JSN, 2019 June 22 (Sat.), Nagoya
JSN/KDIGO Joint Symposium: Onco-Nephrology

"KDIGO Controversies Conference on Onco-Nephrology: What's new for us?"

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Clinical Research Support Center, Nakamura Clinic,
Okinawa, Japan

JSN COI Disclosure

Presenter: Kunitoshi Iseki

For the past 3 years:

I have nothing to disclose

Global Action. Local Change.

KDIGO Controversies Conference on Onco-Nephrology

Dec 14-16, 2018, Milan, Italy

CC Co-chair: Jolanta Malyszko (Poland)

Camillo Porta (Italy)

Iseki, Yanagita, Matsubara, Noiri

KDIGO 2018 Controversies Conference on Onco-Nephrology

2018.12. Milan, Italy

J Salahudeen AK, Bonventre JV. J Am Soc Nephrol. 24(1):26-30, 2013

Onconephrology: the latest frontier in the war against kidney disease.

Abstract

Renal diseases in patients with cancer have many unique features, and often these diseases require specialized approaches. **Newer cancer therapy has increased cancer cure rate and survival time,** but such benefit is not fully realized, partly because of therapy-associated toxicities. Fluid and electrolyte abnormalities are very common in patients with cancer, as are acute and chronic kidney injury. With the evolving complexities of newer cancer therapies, a comprehensive team approach is becoming necessary**. It is essential for nephrologists to be informed and involved in cancer care.** Many nephrologists caring for patients with cancer in the United States have recently met and formed a focus group, the OncoNephrology Forum, under the American Society of Nephrology. This update addresses what is clinically unique about onconephrology, the objectives and functions of the newly formed forum, and the potential of onconephrology becoming a subspecialty in nephrology.

Cosmai L, Porta C, Perazella MA, Launay. Nephrol Dial Transplant 33(9): 1503-1510, 2018

Opening an onconephrology clinic: recommendations and basic requirements

Abstract

Onconephrology is a rapidly evolving subspecialty that covers all areas of renal involvement in cancer patients. The complexity of the field may benefit from **well-defined multidisciplinary management administered by a dedicated team**. Since there is an increasing need to address the needs of this population in dedicated outpatient clinics, it is critical to highlight basic characteristics and to suggest areas of development. In this brief perspective article, we analyze the requirements of an onconephrology clinic in terms of logistics, critical mass of patients and building a multidisciplinary team. We will further discuss which patients to refer and which conditions to treat. The last part of the article is dedicated to education and performance indicators and to analysis of the potential advantages of applying the **hub-and-spoke model** to this field. The ultimate aim of this experience-based article is to initiate debate about what an onconephrology outpatient clinic might look like in order to ensure the highest quality of care for this **growing population of patients**.

T-cell Checkpoint Regulation

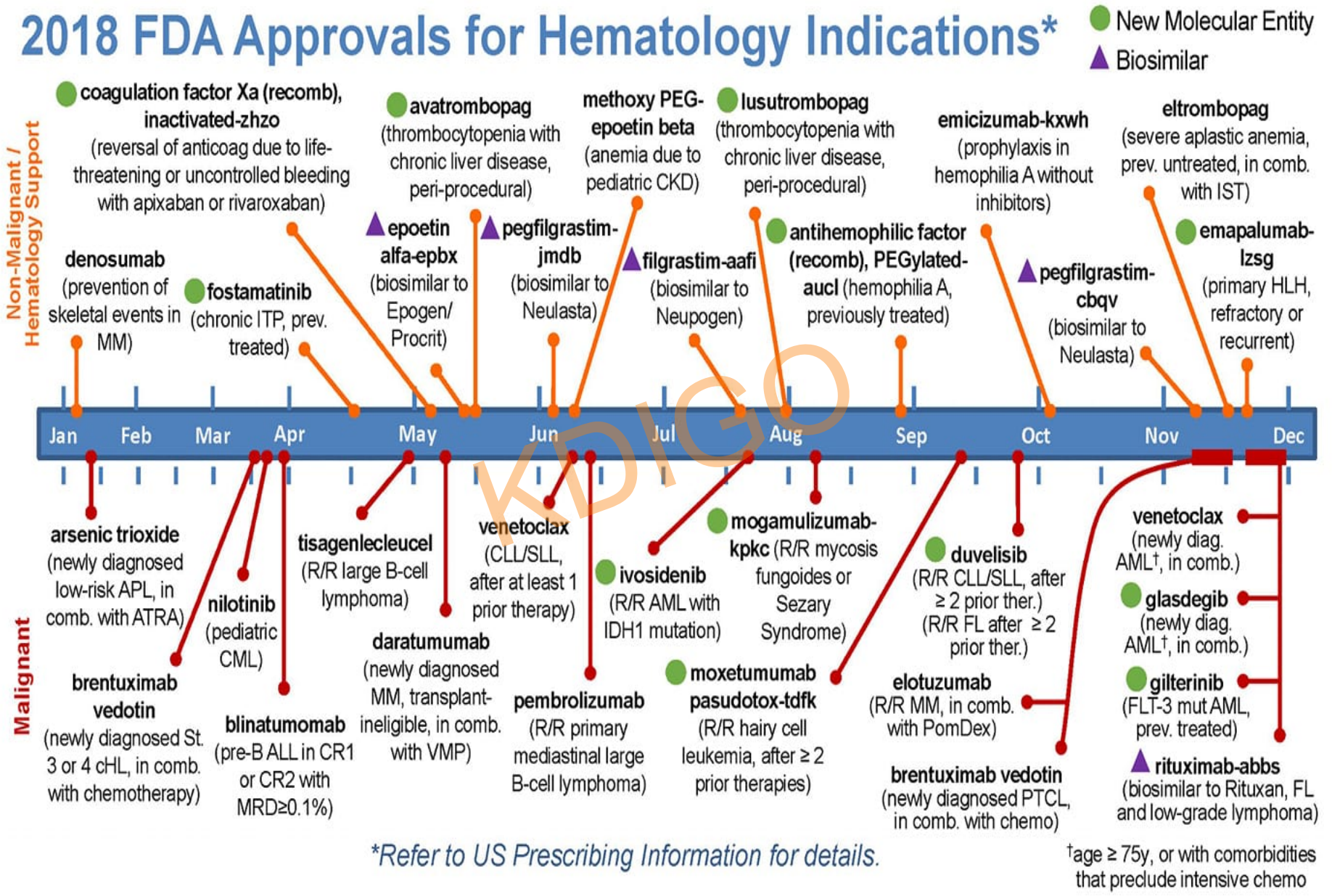
Tasuku Honjo
PD-1
(Programmed cell death protein 1)

James Allison
CTLA-4
(cytotoxic T-lymphocyte-associated protein-4**)**

BC CANCER
Provincial Health Services Authority

2018 Nobel Prize Medicine

2018 FDA Approvals for Hematology Indications*

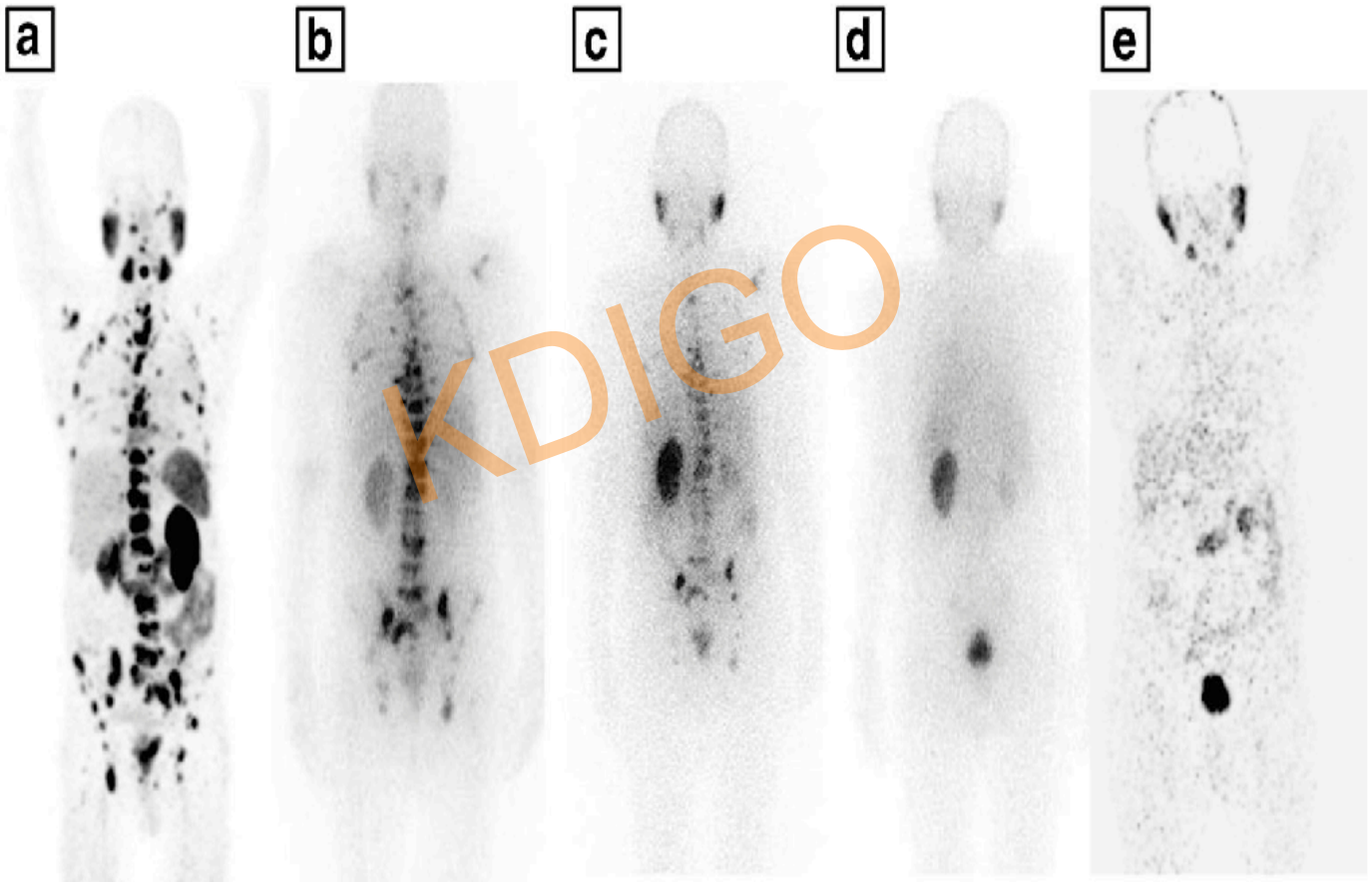


*Refer to US Prescribing Information for details.

†age ≥ 75y, or with comorbidities that preclude intensive chemo

Immuno-Oncology: Radioimmuno-conjugates/Small Molecules

^{177}Lu-PSMA-617 PSMA therapy in castration resistant metastatic prostate cancer:



Baseline | Cycle 11 | Cycle 22 | Cycle 33 | Cycle 44

ONCONEPHROLOGY: ONCOLOGY PERSPECTIVE

Walter Stadler, MD FACP

Section Chief Hematology-Oncology

Deputy Director Comprehensive Cancer Center

University of Chicago

What Has Changed in Oncology: Big Picture

- We keep sub-dividing cancers based on molecular phenotyping
- We increasingly recognize cancer genomic predisposition syndromes
- Smoking is decreasing, weight/metabolic syndrome is increasing
- We have an increasingly large therapeutic armamentarium
  - Many more drugs and targets
  - Much more imaging technology
  - More sophisticated minimally invasive surgical and radiotherapy techniques
- The vast majority of care is in the outpatient setting
- We are increasingly conducting **chronic disease management**

OncoNephrology: The Oncologist's Questions

- What is **the best way to educate nephrologists** regarding the large number of new cancer therapies?
  - Rapid pace of therapeutic advances is difficult even for oncologists
  - Most large academic centers don't even have a nephrologist interested in these aspects
  - Recognition of **drug associated renal toxicities** is typically delayed
  - Many drug associated toxicities are rare

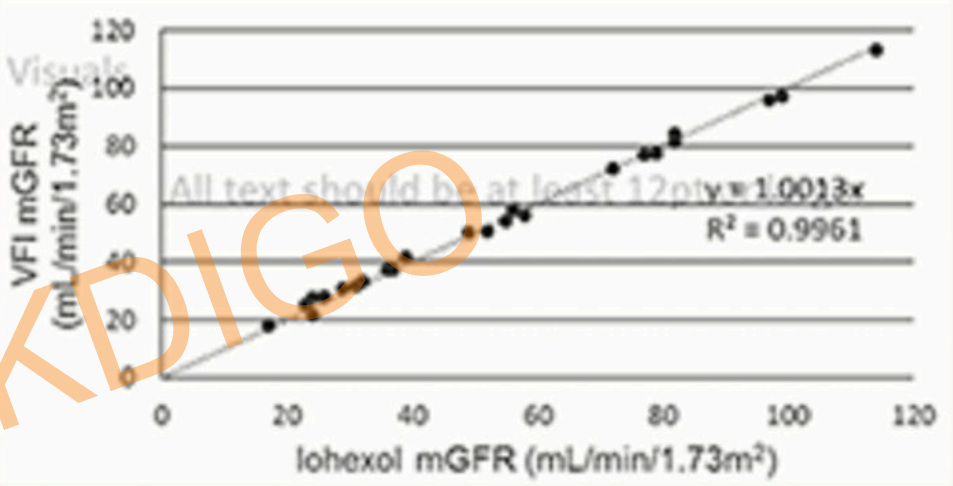
Novel technology allows accurate and rapid measurement of mGFR

METHODS: 32 sbjects were enrolled in the Phase 2b study. mGFR were determined using the FAST BioMedical VFI™ technology and Iohexol clearance. The large maker in the VFI is retained in the vasculature and used to measure plasma volume, a key metric in measuring GFR quickly and accurately.

Cohort 1	Cohort 2	Cohort 3	Cohort 4
8 Healthy Subjects	8 Healthy Subjects	8 CKD Stage 3 Subjects	8 CKD Stage 4 Subjects

VFI: 3ml injection of large & small fluorescent markers. Blood samples 5, 60 , 170 minutes.
Iohexol: 5 ml injection (Omnipaque 300™). Blood samples: 120, 150, 180, 210 320 minutes.

RESULTS: VFI mGFR showed near perfect linear correlation when compared to Iohexol mGFR across wide range of kidney function.



CONCLUSION: VFI ™ is a safe technology that allows the accurate, rapid and highly reproducible measurement of GFR and PV at the bedside in healthy volunteers and across a wide range of kidney function

doi: 10.1681/ASN.2018020160

JASN

JASN 29(6): 1609-1613, 2018

G4　RTX & Cancer

1. 一般住民との比較：腎移植患者の悪性腫瘍による
　　死亡率および悪性腫瘍のリスク因子、保有率
2. ドナー由来の悪性腫瘍の発症頻度および腫瘍別の
　　リスクの関与度
3. どのような状況で悪性腫瘍患者（既往も含む）より
　　の腎提供が認められるか
4. ドナー由来の悪性腫瘍の再発の危険または発症した
　　腎移植患者に対する現時点での報告、スクリー

G4　RTX & Cancer

6. 担癌患者が腎移植を受ける基準
7. 悪性腫瘍の再発リスクおよび再発後の予後
8. 再発リスクおよび予後の予測因子
9. 一般住民におけるスクリーニングと同様か?
10. 乳がん、直腸がん、子宮頚部がんなどに対する

　一般住民における標準的がんスクリーニングと同様に

　他のがん（腎細胞がん、移植後リンパ増殖性疾患:

　PTLD,肺がん）も定期的にスクリーニング（モニター）

G4　RTX　&　Cancer

11. 悪性腫瘍予防啓発の意義
12. 一般住民との相違点、治療法の制約（バイオマーカー、
    イメージ、生検など）
13. 腎機能保持、AKI予防の観点からの抗腫瘍治療（化学、
    放射線、免疫治療）： 例えばCTL3, PD1抑制と急性
    拒絶のリスク
14. 悪性腫瘍治療の限界

Classic fixed waiting time recommendations

Absolute Contraindication

- Uncontrolled or untreated malignance
- Advanced breast cancer (Stage III/ IV)
- Colorectal (Stage D)
- Advanced prostate cancer (Grade 4/5,T3c,T4,N+,M+)

5-year waiting time

- Stage II breast cancer
- Extensive cervical cancer and non-in situ cancer of uterus
- Colorectal (Stage C)
- Melanoma
- Large/invasive/symptomatic renal cell carcinoma

2-year waiting time

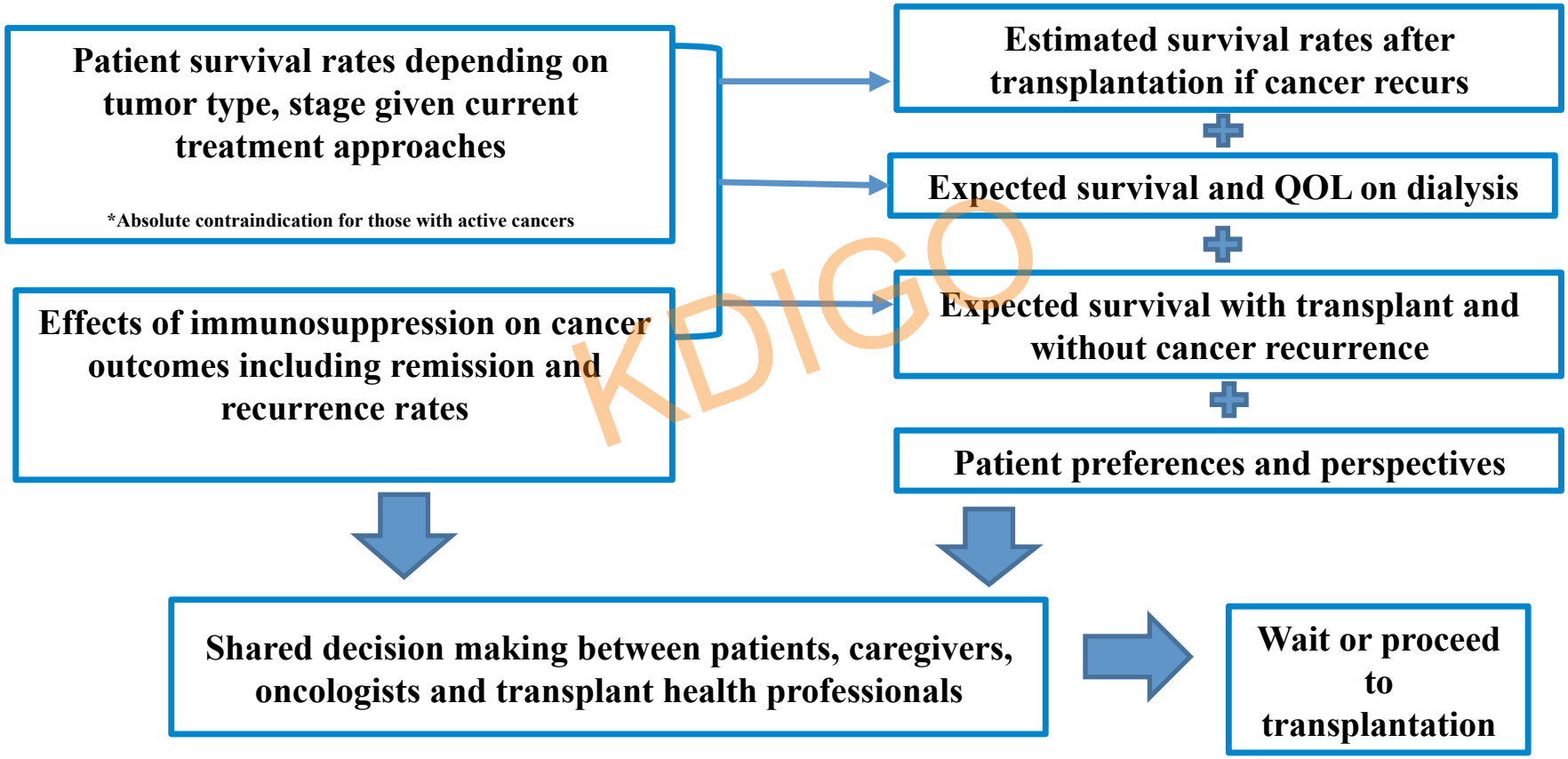
- Invasive bladder cancer
- *In situ* breast cancer /melanoma
- Localized cervical cancer
- Colorectal cancer(Stage A/B1)
- Hodgkin's/non-Hodkgin's lymphoma, PTLD, leukaemia
- Lung cancer
- Prostatic/testicular cancer
- Thyroid cancer
- Wilm's tumour (or 1 year)
- Multiple myeloma (or 1 year)

No waiting time

- Superficial bladder cancer
- Non-metastatic, basal cell carcinoma
- Prostatic cancer microscopic (focal, low grade, Gleason's≤3) (T1a,T1c)
- Incidentally T1 renal cell carcinoma
- MGUS

Adapted from. Sprangers B, Clinical Kidney Journal, 2018, vol. 11, no. 3, 315–329

CONSIDERATION FOR TRANSPLANTATION IN CANDIDATES WITH PRIOR CANCERS AND IN COMPLETE REMISSION



Cancer in Kidney Transplant Recipients.

Abstract

Cancer is the second most common cause of mortality and morbidity in kidney transplant recipients after cardiovascular disease.

Kidney transplant recipients have at least a twofold higher risk of developing or dying from cancer than the general population.

The increased risk of de novo and recurrent cancer in transplant recipients is multifactorial and attributed to oncogenic viruses, immunosuppression and altered T cell immunity.

Transplant candidates and potential donors should be screened for cancer as part of the assessment process.

For potential recipients with a prior history of cancer, waiting periods of 2-5 years after remission - largely depending on the cancer type and stage of initial cancer diagnosis - are recommended.

Au EH, Wong G, Chapman JR. Nat Rev Nephrol 4(8): 508-520, 2018 .

Cancer in Kidney Transplant Recipients.

Abstract

Post-transplantation cancer screening needs to be tailored to the individual patient, considering the cancer risk of the individual, comorbidities, overall prognosis and the screening preferences of the patient.

In kidney transplant recipients diagnosed with cancer, treatment includes conventional approaches, such as radiotherapy and chemotherapy, together with consideration of altering immunosuppression.

As the benefits of transplantation compared with dialysis in potential transplant candidates with a history of cancer have not been assessed, current clinical practice relies on evidence from observational studies and registry analyses.

Au EH, Wong G, Chapman JR. Nat Rev Nephrol 4(8): 508-520, 2018 .

Overall and Site-Specific Cancer Mortality in Patients on Dialysis and after Kidney Transplant.

- Data from 1980 to 2014 ANZDATA
- N=52,936 Dialysis (170,055 pt-y)
- N=16,820 Transplants (128,352 pt-y)
- Cancer SMRs: 2.6 for Dialysis, 2.7 for Transplants
- De novo cancer: 1.2 for Dialysis, 2.6 for Transplants
- Dialysis: multiple myeloma (30.5), testicular cancer (17.0), kidney cancer (7.8)
- Transplants: non-Hodgkin lymphoma (10.7), kidney cancer (7.8), myeloma (5.8)

Au EH,,,, Germaine Wong. JASN 30: 471-480, 2019 .

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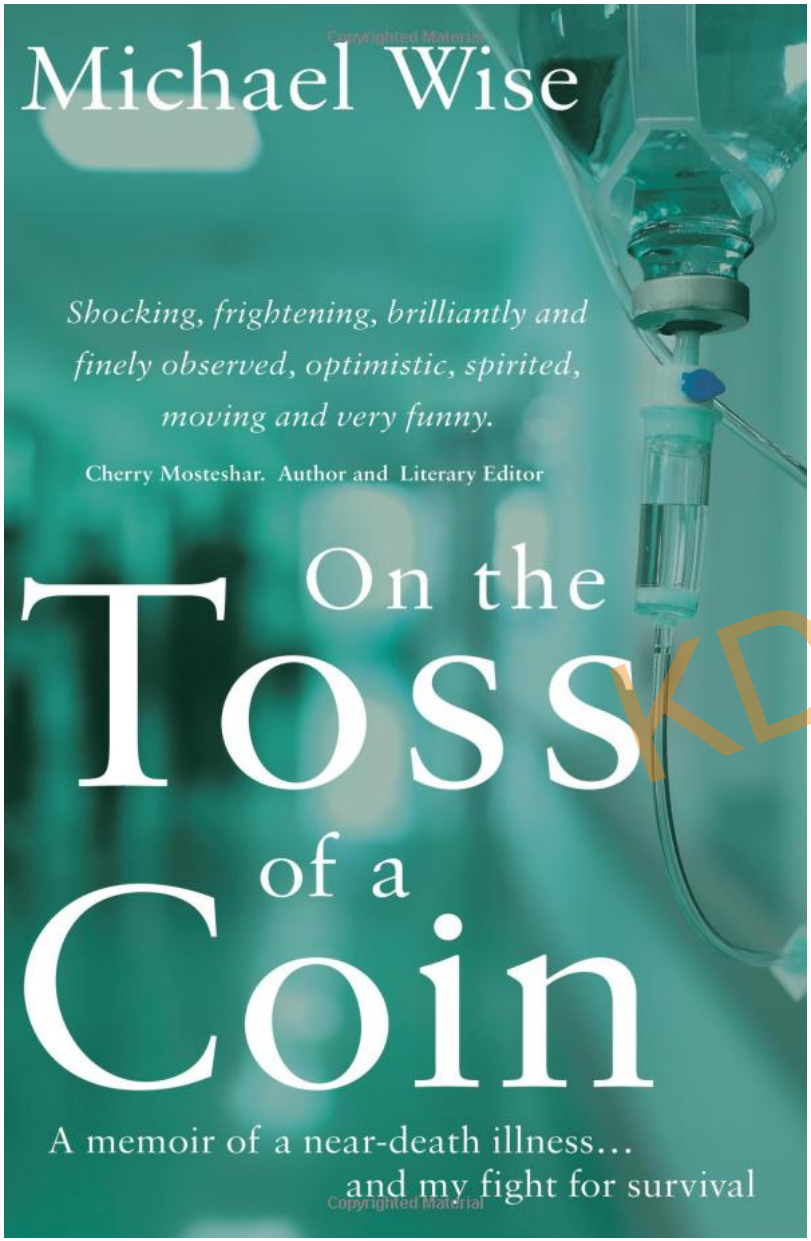
KDIGO Controversies Conference on Acute Kidney Injury (AKI)

April 25-28, 2019, Rome, Italy

CC Co-chair: John A Kellum (USA)

Marlies Ostermann (UK)

Iseki, Doi



UK Dentist

Sudden Sepsis

AKI to ESRD

Cadaver Transplant

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KDIGO Hepatitis C in CKD Implementation Summit

June 1-2. 2019, Hong Kong

CC Co-chair:

Michel Jadoul (Belgium)

Philip Li (Hong Kong)

Iseki, Kanda

Summary of recommendation statements

Chapter 2: Treatment of HCV infection in patients with CKD

2.4 : We recommend that all kidney transplant recipients (KTR) infected HCV be evaluated for treatment.

Chapter 4: Management of HCV-infected patients before and after KT

4.1 Evaluation and management of KT candidates regarding HCV infection

4.2 Use of kidneys from HCV-infected donors

4.3 Use of maintenance immunosuppressive regimens

4.4 Management of HCV-related complications in KTR

Kidney Int (Suppl) 8;91-165, 2018

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KDIGO Consensus Conference on Nomenclature

June 27-29, 2019, Amsterdam, Netherlands

CC Co-chair: Kai-Uwe Eckardt (Germany)

Andrew Levey (USA)

Editorial co-chairs:

Stacy Christiansen (*JAMA*)

Nijsje Dorman (*AJKD*)

Potential Areas of Discussion: 1 to 16

2. The avoidance of the term ‘end-stage.’

Although rooted in United States (US) law, the term is not patient sensitive, may connote a stigma, andmay discourage advocacy.

In the US, ESRD (ESKD) is a synonym for receipt of kidney replacement therapy (KRT).

However, KRT is a treatment rather than a disease.

The term ‘kidney failure,’ which is defined as GFR<15ml/min/1.73m^2 or treatment by dialysis, is as comprehensive as ESRD/ESKD without suffering from its limitations.