

# Statistics and Facts: Acute Kidney Injury (AKI)

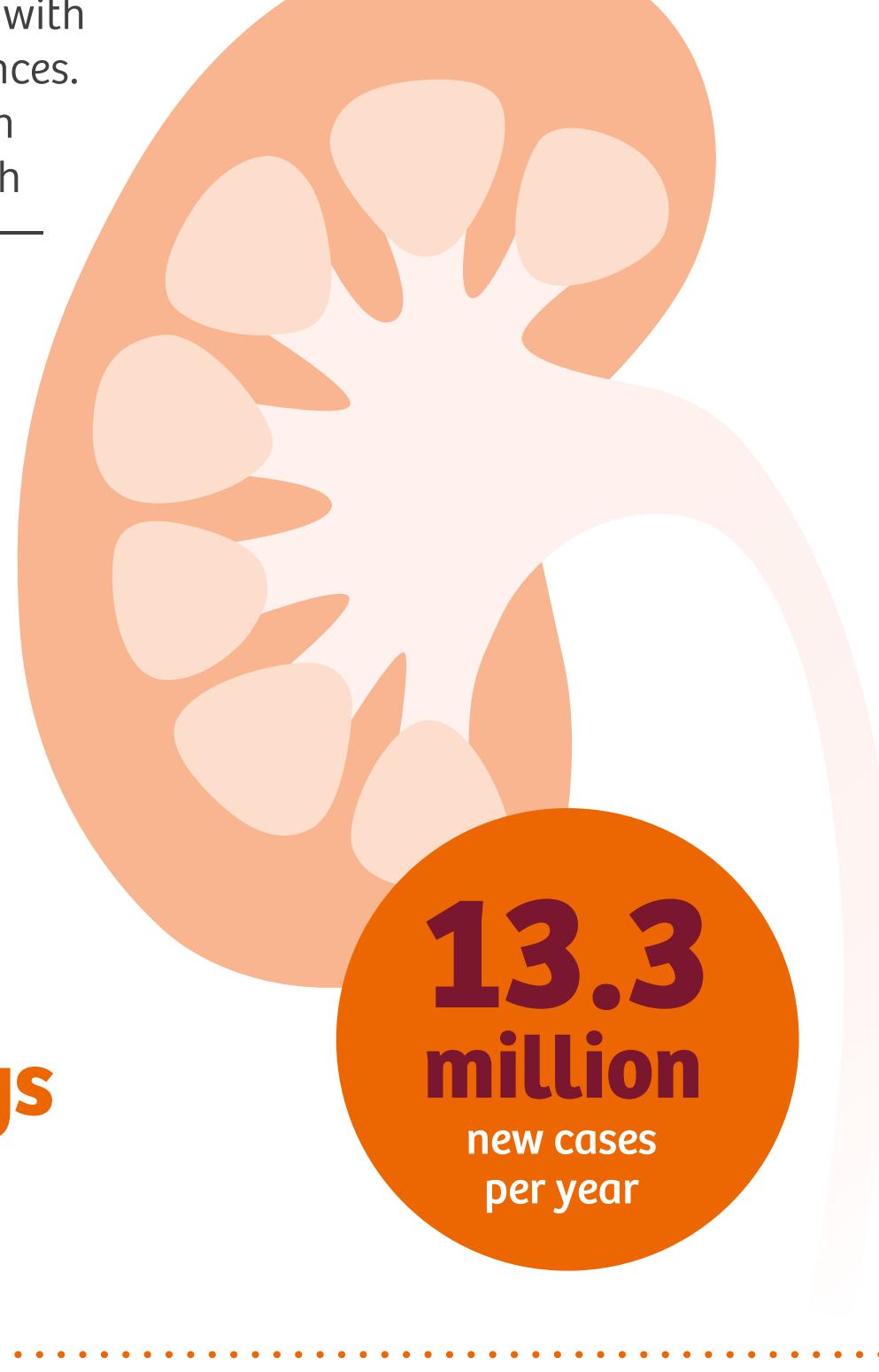
AKI is preventable and treatable, often with few, if any, long-term health consequences. However, the lack of early identification and treatment in many countries—both in the developing and developed world—means that patients often don't receive essential care before it is too late.<sup>1</sup>

**The AKI death rate**  
is higher than for breast cancer,  
prostate cancer, heart failure,  
and diabetes combined.<sup>2</sup>

AKI is common with  
**hospitalization**  
(7–18% of all admissions).<sup>3</sup>

A patient's hospital stay  
**increases 3 to 5 days**

on average if he or she gets AKI.<sup>4</sup>



## Mortality

- AKI accounts for approximately **2 million deaths** annually worldwide.<sup>3</sup>
- The estimated unadjusted mortality associated with an episode of AKI was recently estimated at **23.9% in adults and 13.8% in children**.<sup>5</sup>
- **Increasing severity of AKI correlates with increasing mortality**, which is highest in patients with overt kidney failure requiring renal replacement therapy (RRT).<sup>5</sup>

## Morbidity

### Incidence

- Incidence worldwide is **13.3 million cases per year**.<sup>1</sup>
  - The burden is high in developing countries, where the annual incidence is estimated to be **11.3 million cases per year**.<sup>1</sup>
- Studies suggest an incidence of AKI of **5000 per million (0.5%)** worldwide outside the hospital and **60,000 per million (6%)** inside the hospital.
- The incidence of AKI in intensive-care units is approximately **37,000 per million (3.7%)**.

### Prevalence

Using the KDIGO definition, **1 in 5 adults and 1 in 3 children worldwide** experience AKI during a hospital episode of care. This analysis provides a platform to raise awareness of AKI with the public, government officials, and healthcare professionals.<sup>6</sup>

## Cost

- Annual cost for patients with acute kidney injury in the U.S.: **\$10 billion**.<sup>3</sup>
- Uncomplicated AKI contributes an excess **\$2600 in attributable costs** and a median of **5 additional days of hospitalization**.<sup>5</sup>
- The more complicated the AKI, **the more costly**.

**Early detection can help prevent the progression of kidney disease to kidney failure. Ask your doctor about tests available for early detection of acute kidney injury.**

### References:

1. <http://www.theisn.org/topics/acute-kidney-injury#acute-kidney-injury-aki>
2. <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3758780/>
3. [http://www.astutemedical.com/wp-content/uploads/2015/07/AKI\\_Fact\\_Sheet\\_PN-0104\\_RevD.pdf](http://www.astutemedical.com/wp-content/uploads/2015/07/AKI_Fact_Sheet_PN-0104_RevD.pdf)
4. <http://jasn.asnjournals.org/content/16/11/3365.full>
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6. Susantiphong P. World incidence of AKE: a meta-analysis. 2013 Jun. doi : 10.22515/CJN.00710113 <http://cjasn.asnjournals.org/content/early/2013/06/05/CJN.00710113.full>

# Statistics and Facts: Chronic Kidney Disease (CKD)

Chronic kidney disease (CKD) is a condition characterized by a gradual loss of kidney function over time. Chronic kidney disease may be caused by diabetes, high blood pressure and other disorders. Early detection and treatment can often keep chronic kidney disease from getting worse. When kidney disease progresses, it may eventually lead to kidney failure, which requires dialysis or a kidney transplant to maintain life.

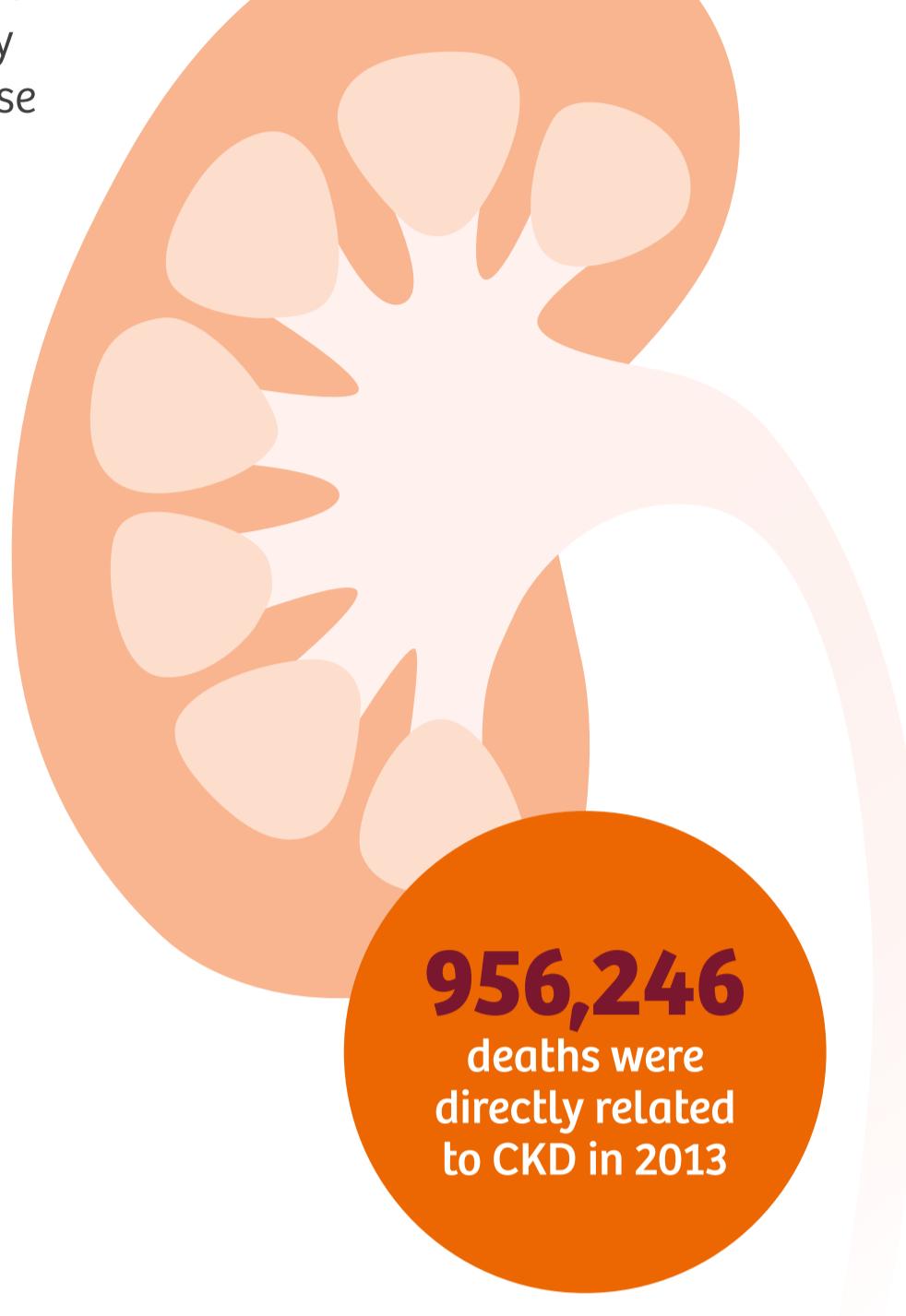
**CKD kills** more people than breast or prostate cancer.<sup>1</sup>

CKD contributes to more than **half of all deaths** among patients with ESRD.<sup>2</sup>

The number of deaths from CKD

**increased 134%**

from 1990 to 2013.<sup>3</sup>



**CKD is ranked 4th**

in the list of growing causes of age-standardized mortality.<sup>3</sup>

## Mortality

- The overall increase in years of life lost due to premature mortality (82%) was third-largest, behind HIV and AIDS (96%) and diabetes mellitus (93%).
- Data on cause of death in the USA and Australia showed that a significant number of patients who had died from diabetes had renal failure, but the cause of death was coded as diabetes without complication. It was estimated that the actual rate of mortality from diabetes-related renal disease is 4 to 9 times higher than reported.<sup>4</sup>

## Morbidity

- Huge differences in incidence and prevalence of end-stage renal disease (ESRD) are reported across countries and regions.
- Most patients receiving treatment for ESRD are living in affluent countries due to universal access to healthcare and large elderly populations.

### Incidence

- In many countries, the incidence is estimated to be 200 cases per million per year.
- Incidence is 400 cases per million in the USA and some regions of Mexico.

### Prevalence

- Prevalence is nearing 1800 cases per million in the USA (with average survival of 3–5 years) and even higher in Japan and Taiwan (2400 cases per million).
- According to estimations, about 1 in 5 men and 1 in 4 women between the ages of 65 and 74, and half of people aged 75 or more, have chronic kidney disease (CKD).<sup>3</sup>
- 10% of adults have some level of CKD in the EU, and 1 in 3 are at risk. The highest CKD prevalence in the EU is:<sup>1</sup>  
1) Portugal; 2) Germany; 3) Cyprus; 4) Spain; 5) Italy.

## Cost

- According to a recent report published by NHS Kidney Care, in England, kidney disease costs more than breast, lung, colon, and skin cancer combined.
- In the U.S., treatment of chronic kidney disease (CKD) is likely to exceed \$48 billion per year, and the ESRD program consumes 6.7% of the total Medicare budget to care for less than 1% of the covered population.

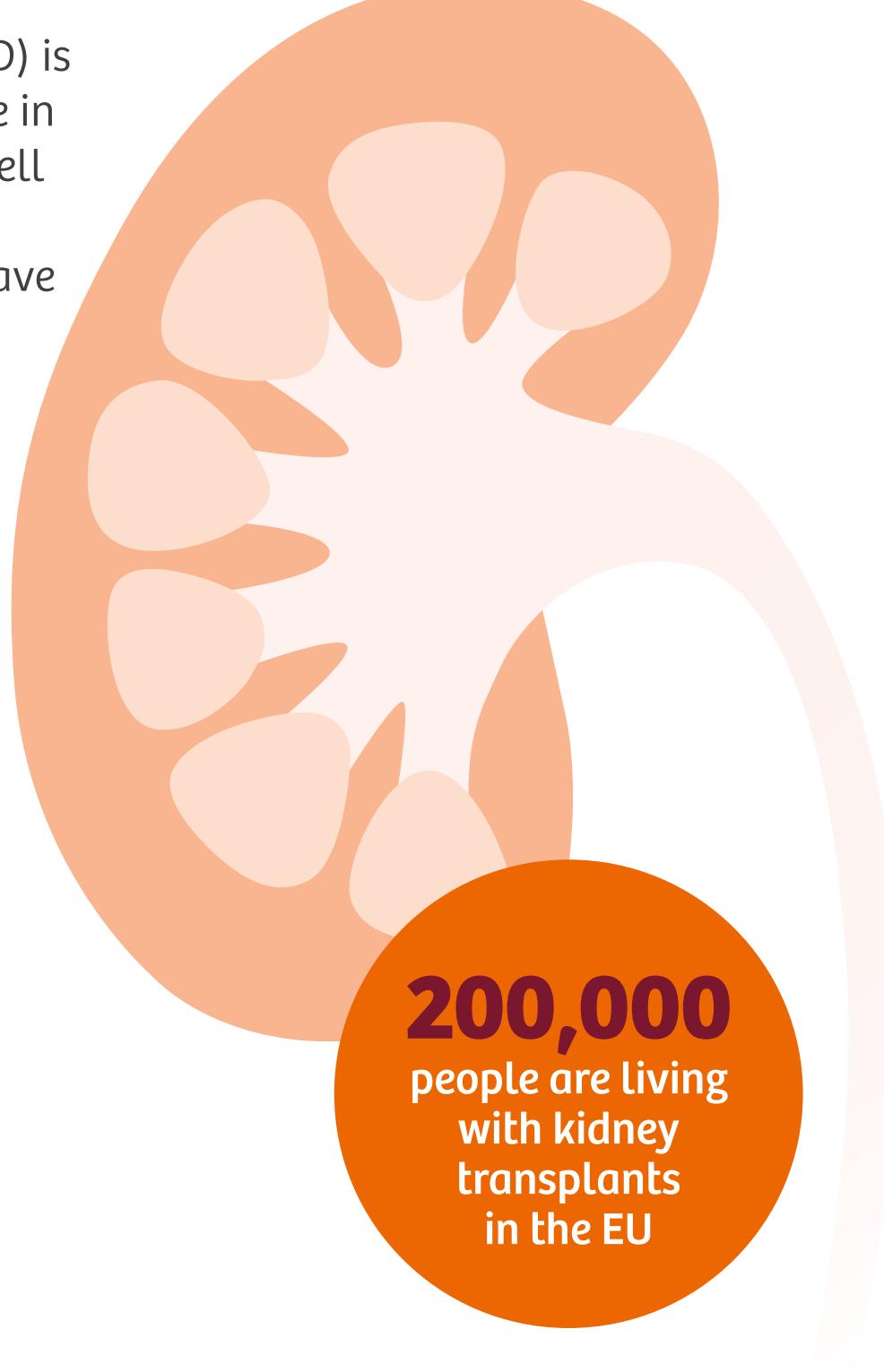
**Early detection can help prevent the progression of kidney disease to kidney failure. Ask your doctor about tests available for early detection of chronic kidney disease.**

# Statistics and Facts: End-stage Renal Disease (ESRD)

End-stage kidney or renal disease (ESRD) is the final stage of chronic kidney disease in which the kidneys no longer function well enough to meet the needs of daily life. People with diabetes or hypertension have the highest risk of developing ESRD.

Dialysis treatment costs **€15 billion** per year, consumes 2% of healthcare budgets in Europe, and is expected to double in the next 5 years.<sup>1</sup>

One stage 5 patient (total or near-total loss of kidney function) costs up to **€80,000 annually.**



## Mortality

- More than 87,000 people die from causes related to kidney failure in the U.S. each year.<sup>2</sup>

## Morbidity

### Incidence

- The number of patients with ESRD is increasing in the United States by **5% per year.**<sup>2</sup>

### Prevalence

- More than 650,000 patients per year in the United States and an estimated **2 million patients worldwide** are affected by end-stage renal disease (ESRD).<sup>2</sup>

## Cost

- 1% of the U.S. Medicare population lives with ESRD, but ESRD **consumes 7% of the Medicare budget.**<sup>2</sup>
- In the U.S., hemodialysis treatment costs approximately **\$89,000 annually per patient.** For all dialysis patients combined, the total annual hemodialysis cost is **\$42 billion.**<sup>2</sup>
- For a kidney transplant, the **average cost is \$32,000 for the transplant surgery.** Post-surgery cost is **\$25,000 per year** to care for the patient and ensure the transplant is not rejected.<sup>2</sup>
- Transplantation: For patients in the U.S., each year there are **fewer than 20,000 donor kidneys available**, but more than 100,000 patients are on the kidney transplant list. The need for donor kidneys is rising at 8% per year.<sup>2</sup>
- Dialysis treatments consume **2% of healthcare budgets** in Europe. This figure is expected to double in the next 5 years.<sup>1</sup>

**Early detection can help prevent the progression of kidney disease to kidney failure. Ask your doctor about tests available for early detection of end-stage renal disease.**

### References:

- <http://ercpa.eu/wp-content/uploads/2015/09/Infograph-final-version-updated.pdf>
- <https://pharm.ucsf.edu/kidney/need/statistics>