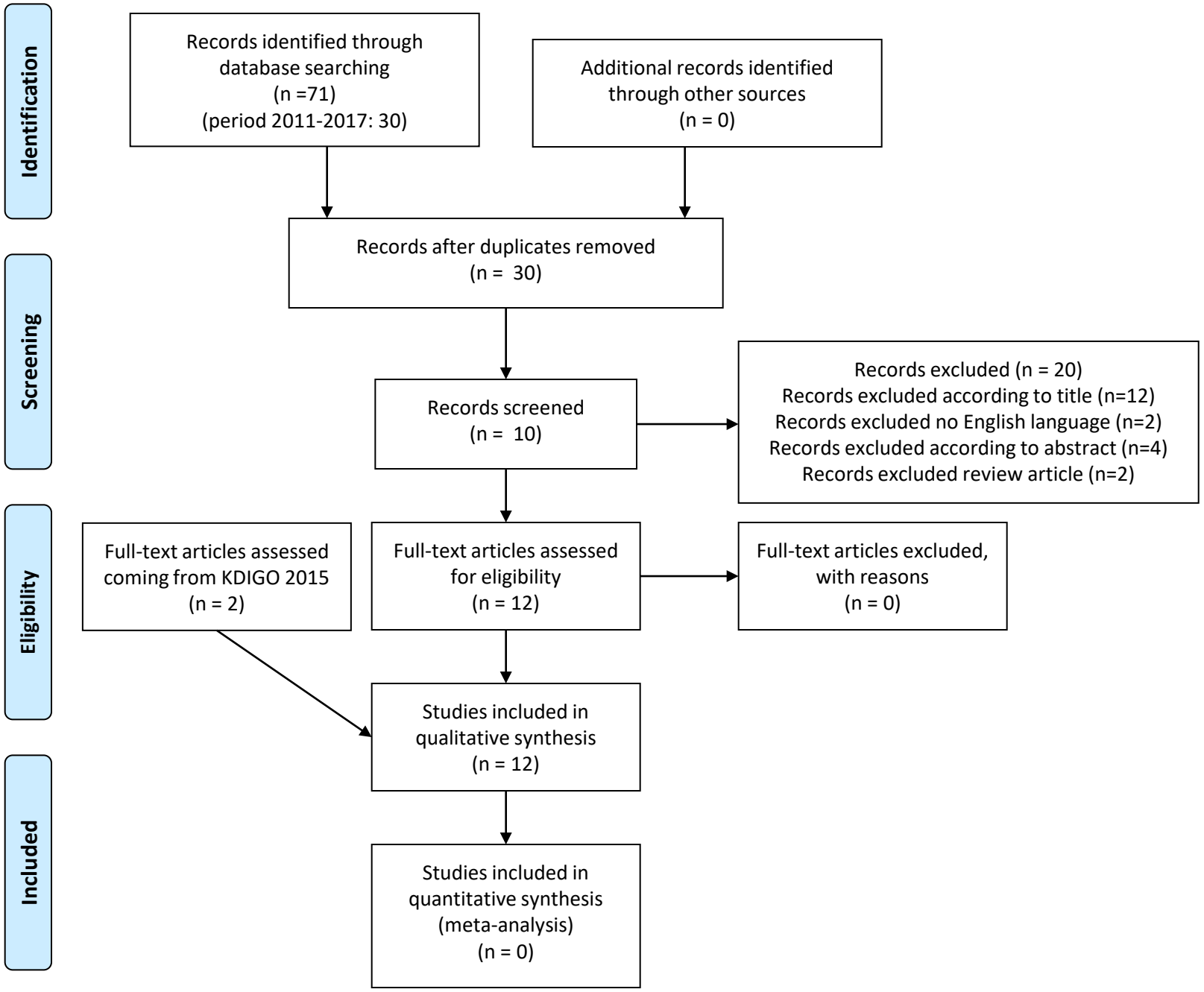
Calcolosi

Systematic: Quirino Lai e Samuele Iesari (L’Aquila)

Linee guida ERBP 2013

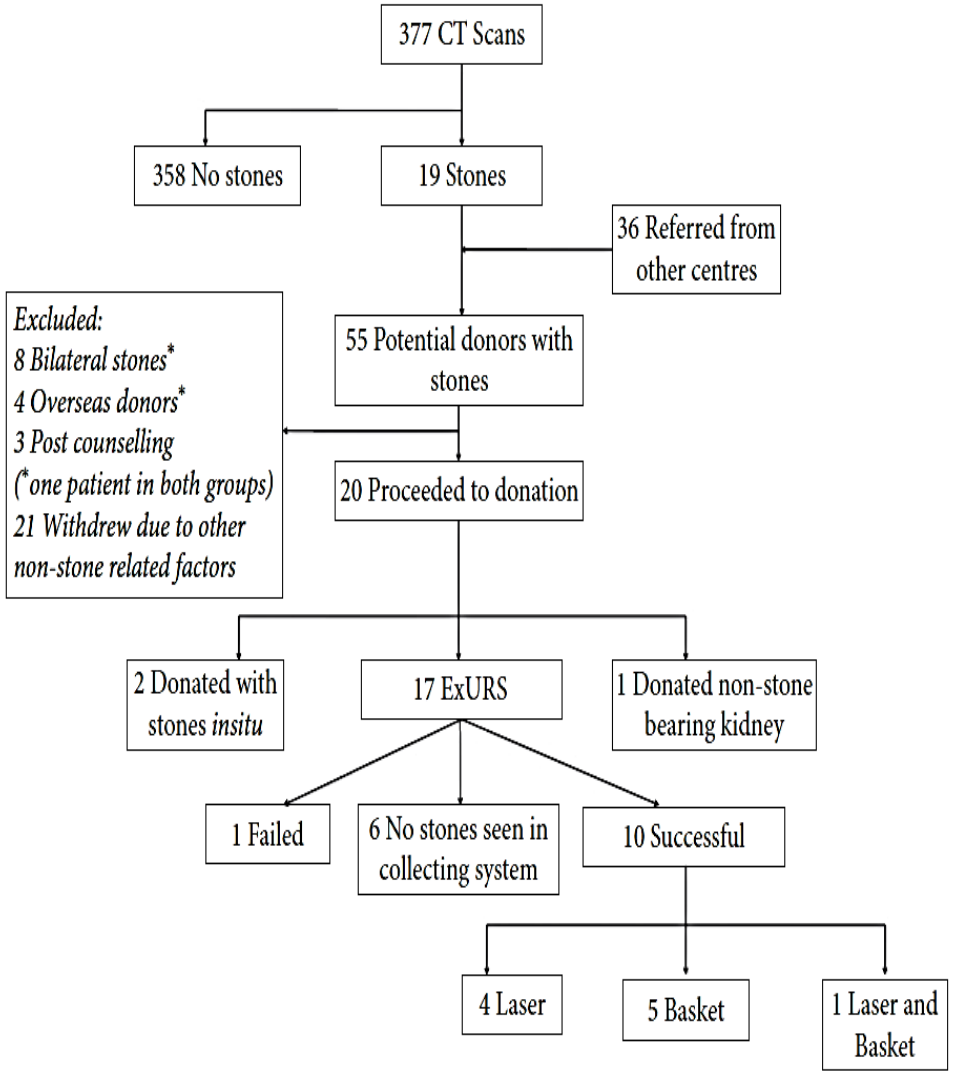
No linee guida


Identification
Screening
Eligibility
Included
Records identified through database searching (n =71) (period 2011-2017: 30)
Additional records identified through other sources (n = 0)
Records after duplicates removed (n = 30)
Records screened (n = 10)
Records excluded (n = 20)
Records excluded according to title (n=12)
Records excluded no English language (n=2)
Records excluded according to abstract (n=4)
Records excluded review article (n=2)
Full-text articles assessed coming from KDIGO 2015 (n = 2)
Full-text articles assessed for eligibility (n = 12)
Full-text articles excluded, with reasons (n = 0)
Studies included in qualitative synthesis (n = 12)
Studies included in quantitative synthesis (meta-analysis) (n = 0)

Studi selezionati

Study
Olsburgh J, Thomas K, Wong K, Bultitude M, Glass J, Rottenberg G, Silas L, Hilton R, Koffman G. Incidental renal stones in potential live kidney donors: prevalence, assessment and donation, including role of ex vivo ureteroscopy. BJU Int. 2013 May;111(5):784-92. doi: 10.1111/j.1464-410X.2012.11572.x. PMID: 23110544
Thomas SM, Lam NN, Welk BK, Nguan C, Huang A, Nash DM, Prasad GV, Knoll GA, Koval JJ, Lentine KL, Kim SJ, Lok CE, Garg AX; Donor Nephrectomy Outcomes Research (DONOR) Network. Risk of kidney stones with surgical intervention in living kidney donors. Am J Transplant. 2013 Nov;13(11):2935-44. doi: 10.1111/ajt.12446. PMID: 24102981
Rizkala E, Coleman S, Tran C, Isac W, Flechner SM, Goldfarb D, Monga M. Stone disease in living-related renal donors: long-term outcomes for transplant donors and recipients. J Endourol. 2013 Dec;27(12):1520-4. doi: 10.1089/end.2013.0203. PMID: 24261656
Alexander RT, Hemmelgarn BR, Wiebe N, et al. Kidney stones and kidney function loss: a cohort study. BMJ 2012; 345: e5287.
Fink HA, Wilt TJ, Eidman KE, et al. Medical management to prevent recurrent nephrolithiasis in adults: a systematic review for an American College of Physicians Clinical Guideline. Ann Intern Med 2013; 158: 535-543.

Olsburgh J, Thomas K, Wong K, Bultitude M, Glass J, Rottenberg G, Silas L, Hilton R, Koffman G. Incidental renal stones in potential live kidney donors: prevalence, assessment and donation, including role of ex vivo ureteroscopy. BJU Int. 2013 May;111(5):784-92. doi: 10.1111/j.1464-410X.2012.11572.x. PMID: 23110544



377 potential kidney donors October 2004 - May 2007, United Kingdom.

5% prevalence of asymptomatic renal stones.

Out of 55 potential donors, 20 with stones proceeded to donation, with stone size ranging from 2 to 12 mm.

Of the patients, 17 proceeded to ex vivo ureteroscopy, with 10 successful procedures.

No early or late allograft stone-related complications and no evidence of stones on follow-up imaging at a mean (range) of 10 (1–24) months.

No reported stone recurrence in any of the donors to date and no stone on ultrasonography of eight donors with >1-year follow-up (mean 26 months, range 12–49 months).

Thomas SM, Lam NN, Welk BK, Nguan C, Huang A, Nash DM, Prasad GV, Knoll GA, Koval JJ, Lentine KL, Kim SJ, Lok CE, Garg AX; Donor Nephrectomy Outcomes Research (DONOR) Network. Risk of kidney stones with surgical intervention in living kidney donors. Am J Transplant. 2013 Nov;13(11):2935-44. doi: 10.1111/ajt.12446. PMID: 24102981

2019 donors and **20190** non-donors. (match 1:10), 1992-2009 Ontario, Canada.

Median follow-up time was 8.4 years (maximum 19.7 years).

There was no difference in the rate of kidney stones with surgical intervention in donors compared to non-donors (8.3 vs. 9.7 events/10 000 person-years; rate ratio 0.85).

Similarly, there was no difference in the rate of hospital encounters for kidney stones (12.1 vs. 16.1 events/10 000 person-years; rate ratio 0.75)

Table 3: Risk factors for kidney stones in donor and nondonors when each group was analyzed separately

	Donors	Nondonors
Kidney stones with surgical intervention		
Older age (per 5 years)	1.15 (0.90–1.50)	1.12 (1.02–1.23)
Women (vs. men)	0.92 (0.30–2.85)	0.49 (0.34–0.73)
Rural residence (vs. urban residence)	2.49 (0.29–21.65)	1.04 (0.59–1.84)
Higher income quintile	0.87 (0.59–1.29)	0.95 (0.82–1.10)
More recent year of index date	0.97 (0.85–1.11)	0.99 (0.94–1.04)
Hospital encounters for kidney stones		
Older age (per 5 years)	1.02 (0.82–1.26)	1.08 (1.01–1.15)
Women (vs. men)	1.60 (0.56–4.58)	0.46 (0.34–0.61)
Rural residence (vs. urban residence)	1.74 (0.33–9.06)	1.08 (0.70–1.67)
Higher income quintile	1.00 (0.70–1.43)	0.92 (0.82–1.02)
More recent year of index date	1.01 (0.91–1.13)	0.98 (0.95–1.02)

Separate negative binomial models were created for donors and nondonors. Presented are the rate ratios and 95% confidence intervals.

Rizkala E, Coleman S, Tran C, Isac W, Flechner SM, Goldfarb D, Monga M. Stone disease in living-related renal donors: long-term outcomes for transplant donors and recipients. J Endourol. 2013 Dec;27(12):1520-4. doi: 10.1089/end.2013.0203. PMID: 24261656

54 donor-recipient pairs coming from US, period 2001-2011.

7/28 (25%) donors having valid preoperative 24-hour urine collection had hypercalciuria.

7 (13%) patients had previous symptomatic nephrolithiasis, but no stones on imaging.

41 patients donated a kidney with at least one stone, with a mean stone size of 2.4 mm (range 1–6 mm).

Median follow-up for donors: 22.5 months (IQR: 1–79.3)
Median follow-up for recipients: 47.4 months (IQR: 25.1–76.1).

Only one donor with nephrolithiasis on preoperative imaging who donated the contralateral kidney passed a stone spontaneously.
Otherwise, no other donors or recipients experienced any stone episodes.

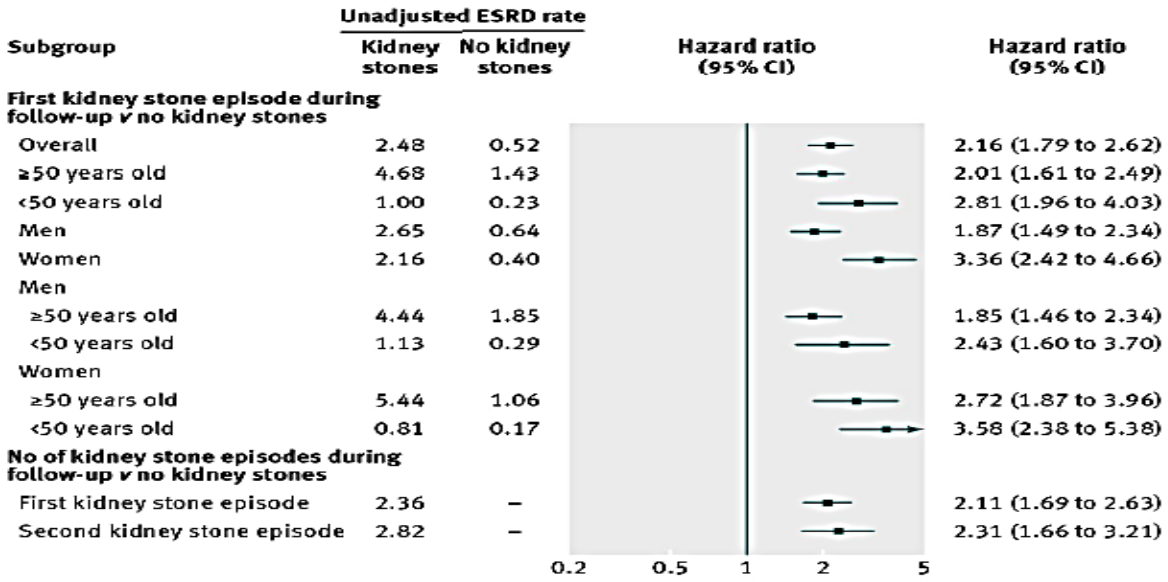
The risk of clinical stone recurrence in donors and recipients is low.

Alexander RT, Hemmelgarn BR, Wiebe N, et al. Kidney stones and kidney function loss: a cohort study. BMJ 2012; 345: e5287.

1,954,836 adult patients without ESRD , Alberta, Canada, 1997-2009. Median FU: 11 years.
23,706 (0.8%) patients had at least one kidney stone
68,525 (4%) developed stage 3b–5 chronic kidney disease
5,333 (0.2%) developed ESRD

Overall, one or more stone episodes associated with:
ESRD (HR=2.16, 95%CI=1.79-2.62) / stage 3b–5 chronic kidney disease (HR=1.74, 95%CI=1.61-1.88)

Absolute increase in the rate of ESRD was small:
2.48 vs. 0.52 per million person days in people with or without stones.



Fink HA, Wilt TJ, Eidman KE, et al. Medical management to prevent recurrent nephrolithiasis in adults: a systematic review for an American College of Physicians Clinical Guideline. Ann Intern Med 2013; 158: 535-543.

28 English-language RCTs that studied treatments to prevent recurrent kidney stones.

In patients with 1 past calcium stone, factor influencing reduction of stone risk were:

- increased fluid intake (RR=0.45, 95%CI=0.24-0.84)
- reducing soft-drink consumption (RR=0.83, 95%CI=0.71-0.98)

A multicomponent diet based on increased fluid intake, normal to high calcium (1200 mg/d), low animal protein, and low sodium intake had a reduced risk for composite stone recurrence compared with those assigned to a low calcium diet (400 mg/d) (RR=0.52 (95%CI=0.29-0.95)

In patients with multiple past calcium stones, factor influencing reduction of stone risk were:

- thiazides (RR=0.52, 95%CI=0.39-0.69)
- citrates (RR=0.25, 95%CI=0.14-0.44) (calcium stones, preventing recurrence)
- allopurinol (RR=0.59, 95%CI=0.42-0.84) (composite stones, hyperuricosuria, preventing recurrence)

Rate of hospital encounters for kidney stones in donors compared to non-donors is low (12.1 vs. 16.1 events/10 000 person-years)

In healthy population, the overall correlation between one or more stone episodes and ESRD is doubled (HR=2.16)

However, the absolute increase in the rate of ESRD is small: 2.48 vs. 0.52 per million person days in people with or without stones.

No studies exist on the risk in patients having only one kidney.

In patients with 1 past calcium stone, increased fluid intake halved the risk of having a new stone. A multicomponent diet based on increased fluid intake, low animal protein, and low sodium intake reduced the risk for composite stone recurrence

In patients with multiple calcium stones, use of thiazides, citrates and allopurinol also reduces the risk of having a new stone.