Supplementary Tables of the article "The Risks of Renal Angiomyolipoma: Reviewing the Evidence".

Supplementary Table 2. Surgical prophylaxis: Summary of selected series which included prophylactic management against the risk of bleeding.

Study	Patients	Size (mean cm)	Indication (n)	Method	Follow-up (mean months)	Result (n)
Faddegon and So 2011 (5)	42/59 patients including TSC	5.9	Multifocal AML 7%, acute hemorrhage 14%, suspicion of malignancy, large size, failure of embolization or surgeon/patient preference	Radical nephrectomy 60%, PN 40%	NA	No re-operation or urinary leakage
Mues et al. 2010 (29)	sRAML, 38 patients, prospective database	3.8	Prophylaxis (9) for size >4 cm or suspicion of malignancy (29)	PN (15), LPN (10), nephrectomy (10), cryoablation (2)	54.4	No recurrence
Yip et al. 2000 (32)	23 patients, 21 symptomatic, includes TSC	12.3	Suspicion of malignancy (7), spontaneous rupture (5), pain (9), nonspecific symptoms (7), incidental (2)	NSS 16, total nephrectomy (7)	26	Postoperative complications (2), recurrence of epithelioid tumor (1), renal failure (1)
Heidenreich et al. 2002 (33)	28 patients	5.5[a]	Hemorrhage 16%, prophylactic for size >4 cm 20% or suspicion of malignancy 64%	NSS	58[a]	Urinary fistula 7.1%, no renal function impairment, no recurrence
Minervini et al. 2007 (35)	37 patients	5.2	Symptoms, size >4cm or suspicion of malignancy	Nephrectomy 3, enucleation 34	56	EBL170 ml, post-operative transfusion (1), urosepsis (2), no local recurrence, new lesions (2)
Boorjian et al. 2007 (36)	sRAML, 58 patients	3.9[a]	Size >4 cm or symptoms 74%, suspicion of malignancy 24%	Open PN	96[a]	Intraoperative blood transfusion 23%, early postoperative complications rate 12.1%, ileus 8.6%, urine leak 5.2%, AML recurrences 3.4%, no significant effect on serum creatinine or de novo renal impairment
Simmons et al. 2009 (37)	35 patients	23 ≤ 4 cm, 12 >4 cm	Size >4 cm, chronic pain requiring opioid analgesics or prior spontaneous perirenal hemorrhage	LPN	NA	NA
Msezane et al. 2010 (38)	14 patients, 15 kidneys, prospective database	2[a]	Preoperative diagnosis of AML 33%	LPN	15[a]	EBL 214 mL, no recurrence or bleeding, complications 21.4%

Kara et al. 2016 (39)	53 patients	2.8[a]	Suspicion of malignancy 79.2%, risk of bleeding or pain 20.8%.	RPN	7[a]	Postoperative complication 15%, median eGFR preservation 91%, no urinary fistula, secondary intervention or recurrence
Lin et al. 2016 (40)	23 patients	5.2[a]	Size or symptoms 57%, prior bleeding, 26%, suspicion of malignancy 17%	RPN	40[a]	26% perioperative complication Clavien Grade I-II, no second intervention or local recurrence, median eGFR preservation 86.9%
Golan et al. 2017 (41)	40 patients, include TSC	7.2[a]	Large or symptomatic RAML	RPN	8[a]	Operative complications 17.5%, no AML related symptoms at follow up, 95% preservation of eGFR

AML, angiomyolipoma; EBL, estimated blood loss; eGFR, estimated glomerular filtration rate; LPN, laparoscopic partial nephrectomy; NA, not available; NSS, nephron sparing surgery; PN, partial nephrectomy; RAML, renal AML; RPN, robotic partial nephrectomy; sRAML, sporadic renal AML; TSC, tuberous sclerosis complex.

[a]Median

Supplementary Table 3.Embolization: Summary of selected series which included prophylactic management against the risk of bleeding.

Study	Patients	Size (mean cm)	Indication (n)	Follow-up (mean months)	Result (n)
Flum et al. 2016 (4)	196 patients review	7.8-15	Prophylactic, therapeutic, large lesions	14-85.2	Complications 0-19.5%, recurrent hemorrhage, symptoms or growth 10.5-39%, recurrent embolization 5.6-56.3%, surgery 0-14.8%
Faddegon and So 2011 (5)	17/59 patients, includes TSC		Multifocal AML 35%, acute hemorrhage 50%		Multiple treatments (3), repeat embolization (1), unsuccessful (1)
Nelson and Sanda 2002 (8)	76 patients Literature Pooled analysis, TSC included		Acute hemorrhage, symptoms or prophylaxis	23[a]	Complications 10% (renal abscess and pulmonary), recurrence or hemorrhage 17%, repeat embolization 14%, surgery 16%, no renal impairment
Wang et al. 2017 (22)	79 patients, incidental 39%	8.4	Prophylaxis against bleeding in 39% due to size >4 cm and abnormal vasculature	35.9	Clinical success rate 91% (72/79), frequent retreatment in half the patients and 86% postembolization syndrome, size decreased at 16.8 months to 6.7 cm, unplanned repeat embolization in 6.3% of patients due to tumor relapse
Chick et al. 2010 (42)	34 patients symptomatic or with lesions >4 cm, includes 9 TSC	11.9	Previous hemorrhage (14) or size >4 cm (19), lesion growth (1)	44.2	Success rate 85%: no recurrence or symptoms requiring intervention, major complication self-resolving (1), required surgery 14.7%; repeat embolization 14.7%: pain or hematuria (2), increase in size (2), suspicion of malignancy (1)
Chan et al. 2011 (43)	26 patients, 28 kidneys, includes TSC	10.9	Prophylactic 46.4% >4.1 cm, therapeutic and emergency 53.6% of lesions	85	Success rate 93%, re-embolization 14.8%, success at 5 years 63%, need for surgery 14.8% associated with lesions >10 cm
Ramon et al. 2009 (44)	41 patients, 48 kidneys, includes TSC	10.3	Large or symptomatic RAML, risk for bleeding	60	Success rate 91%, minor complication 11%, avoidance of surgery 94% of the kidneys, no retroperitoneal hemorrhage, no significant changes in creatinine levels
El Rafei et al. 2015 (45)	24 patients, 30 lesions	137[b]	Prophylaxis, risk of bleeding: size >4 cm, or aneurysm >4-5mm, history of minor bleeding		Clinical success rate 87% (reduction in size and vascularity), transient post embolization syndrome 63%, no long-term results on bleeding
Hocquelet et al. 2014 (46)	19 patients, 39 lesions	136[b]	Prophylaxis	28[a]	Mean size reduction 72%, no bleeding or need for surgical intervention for any patient post embolization, long term results on bleeding not available
Villalta et al. 2011 (47)	48 patients, 72 lesions, 66 embolization, TSC included	8.1	Bleeding 50%, size 24.2%, pain 19.7%	20.4	Reduction in size 25%, repeat embolization 21.2%

Lee et al. 2009 (48)	11 patients	8.57	Pain (9), bleeding (5), prophylactic (2)	28.3	Abscess formation (1), tumor relapse 18.2%, mean size reduction 43.0%
Williams et al. 2006 (49)	TSC-RAML, 16 patients	315[b]	Prophylaxis: prevent bleeding and preserve functional renal tissue, size >4 cm, angiography characteristics	40	Mean decrease in size 56.1%, no subsequent hemorrhage, no significant deterioration of renal function
Bishay et al. 2010 (50)	16 patients, 23 lesions	15	Prophylactic RAML >10 cm	29	Required multiple sessions 38%, repeat embolization due to regrowth or reperfusion 12%, hemorrhage at 59 months 6.2%, no rise in serum creatinine ≥17.7 umorl/L

AML, angiomyolipoma; RAML, renal AML; sRAML, sporadic renal AML; TSC, tuberous sclerosis complex.

[a]Median

[b]Volume cm^3

Supplementary Table 4. Observation: Summary of selected series which included prophylactic management against the risk of bleeding.

Study	Patients	Size (mean cm)	Indication	Method (n)	Follow-up (mean months)	Result (n)
Ouzaid et al. 2014 (26)	130 patients, 78.5% asymptomatic	71% lesions <4 cm, 29% ≥ 4 cm	Active surveillance	Active surveillance	40	Active treatment required in 13% (embolization 65%, PN 29%), risk factors were size ≥4 cm and symptoms at diagnosis
Mues et al. 2010 (29)	sRAML 45 patients, prospective database	1.7	Size <4 cm (42), high risk for surgery (3)	Active surveillance	54.8[a]	Low growth rate (0.088 cm/year), 6.7% secondary intervention hemorrhage (2) and rapid growth (1)
Patel et al. 2005 (34)	12 patients, 185 renal masses, TSC-RAML	3.6	Incidental, evaluation of mass	Surveillance, prophylactic embolization (2 lesions >12cm), nephrectomy or PN for risk of hemorrhage or pain (4)	48[a]	Slow growth rate, rapid growth >0.5 cm/year (3 masses), hemorrhage (1)
Steiner et al. 1993 (51)	24 patients, 28 tumors, Lesions ≤4 cm: 0% symptomatic, >4 cm: 54% symptomatic	4.4		Surveillance	48	Lesions ≤4 cm: nephrectomy for fear of bleeding during pregnancy (1), >4 cm: patients needed nephrectomy (7), PN for pain/hemorrhage (6) or suspicion of malignancy (1)
Bhatt et al. 2016 (52)	447 patients, incidental 90.8%	1[a]	Lesions ≤4 cm 90%	Active surveillance	43[a]	Extremely slow annual growth rate, overall patients needed an intervention (25) in 5.6%; patients with lesions >4 cm (47), 38% (18) had an intervention
De Luca et al. 1999 (53)	33 patients, 31 asymptomatic, 38 lesions	1.5	Asymptomatic, lesions <4 cm	Surveillance	60.2	Rare complications, 92% of lesions had no change in size, new lesions or serious complications, 3 lesions grew mean 0.8 cm
Kennelly et al. 1994 (54)	31 patients, 42 kidneys, Observation 22 kidneys	17 lesions <4 cm, 5 lesions ≥ 4 cm	Asymptomatic 18 patients, 22 kidneys	Observation	46	No bleeding, progression in size (1), creatinine change was 0.1 mg/dl in sAML
Oesterling et al. 1986 (55)	10 out of 13 patients, 11 lesions	5.7	Asymptomatic, flank mass, microscopic hematuria	Observation	50.2	No change
van Baal et al. 1994 (56)	TSC, 20 patients, prospective	Multiple bilateral		Observation	60	Severe hemorrhage (5) (lesions >3.5 cm), embolization (3), mortality (1), spontaneous resolution (1)

[a]Median

AML, angiomyolipoma; RAML, renal AML; PN, partial nephrectomy; sRAML, sporadic renal AML; TSC, tuberous sclerosis complex.

Supplementary Table 5. mTOR inhibitor: Summary of selected series which included prophylactic management against the risk of bleeding.

Study	Patients	Size (Median volume cm^3)	Indication	Method	Follow-up (median)	Result
Bissler et al. 2013 (2)	79 patients TSC-RAML of at least 3 cm diameter in the treatment arm, 39 in placebo arm, clinical trial, double blind prospective	Treatment arm 85	Endpoint reduction in size	Everolimus	38 weeks	2 patients discontinued treatment because of adverse events, 42% clinical response (size reduction >50%), no bleeding reported in patients or controls
Bissler et al. 2016 (57)	112 patients TSC-RAML, open label extension of the clinical trial (2)	92.1	Endpoint reduction in size	Everolimus	28.9 months	No bleeding, adverse events mostly grade 1-2, discontinuation because of adverse events 9 patients (8%)

RAML, renal AML; TSC, tuberous sclerosis complex.