

Cost-Effectiveness Analysis of ^{99m}Tc - sestamibi SPECT/CT to Guide Management of Small Renal Masses

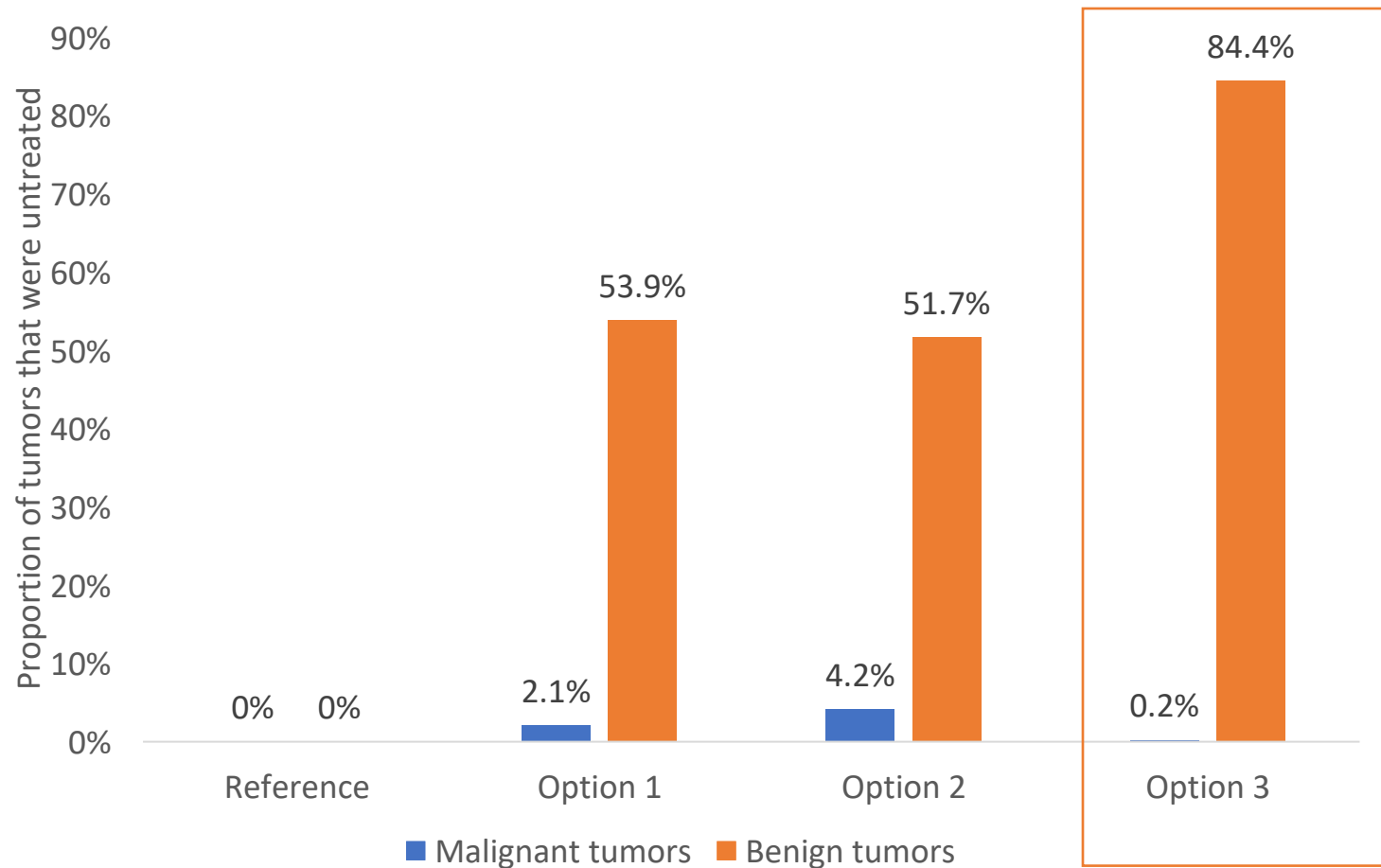
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Sestamibi followed by biopsy maximizes untreated benign tumors and has a very low risk of untreated malignant tumors



Reference = empiric partial nephrectomy

Option 1 = renal mass biopsy (RMB)

Option 2 = Technetium-99m sestamibi single photon emission computed tomography/computed tomography (^{99m}Tc-sestamibi SPECT/CT)

Option 3 = ^{99m}Tc-sestamibi SPECT/CT followed by RMB to confirm benign small renal masses (SRMs)

Sestamibi followed by biopsy is the most cost-effective management strategy

Strategy	Reference: Immediate PN	Option 1: Biopsy	Option 2: Sestamibi	Option 3: Sestamibi → biopsy
Total per patient				
Lifetime costs	\$322,822	\$322,174	\$321,165	\$320,192
Total QALYs	9.957	9.954	9.961	9.972
Incremental (vs. PN)				
Δ costs	\$0	-\$648	-\$1,657	-\$2,629
Δ QALYs	0	-0.003	0.004	0.015
ICER, \$/QALY	-	Less Costly and Less Effective	Dominant	Dominant

QALY = quality-adjusted life year
 ICER = incremental cost-effectiveness ratio
 LY = life year