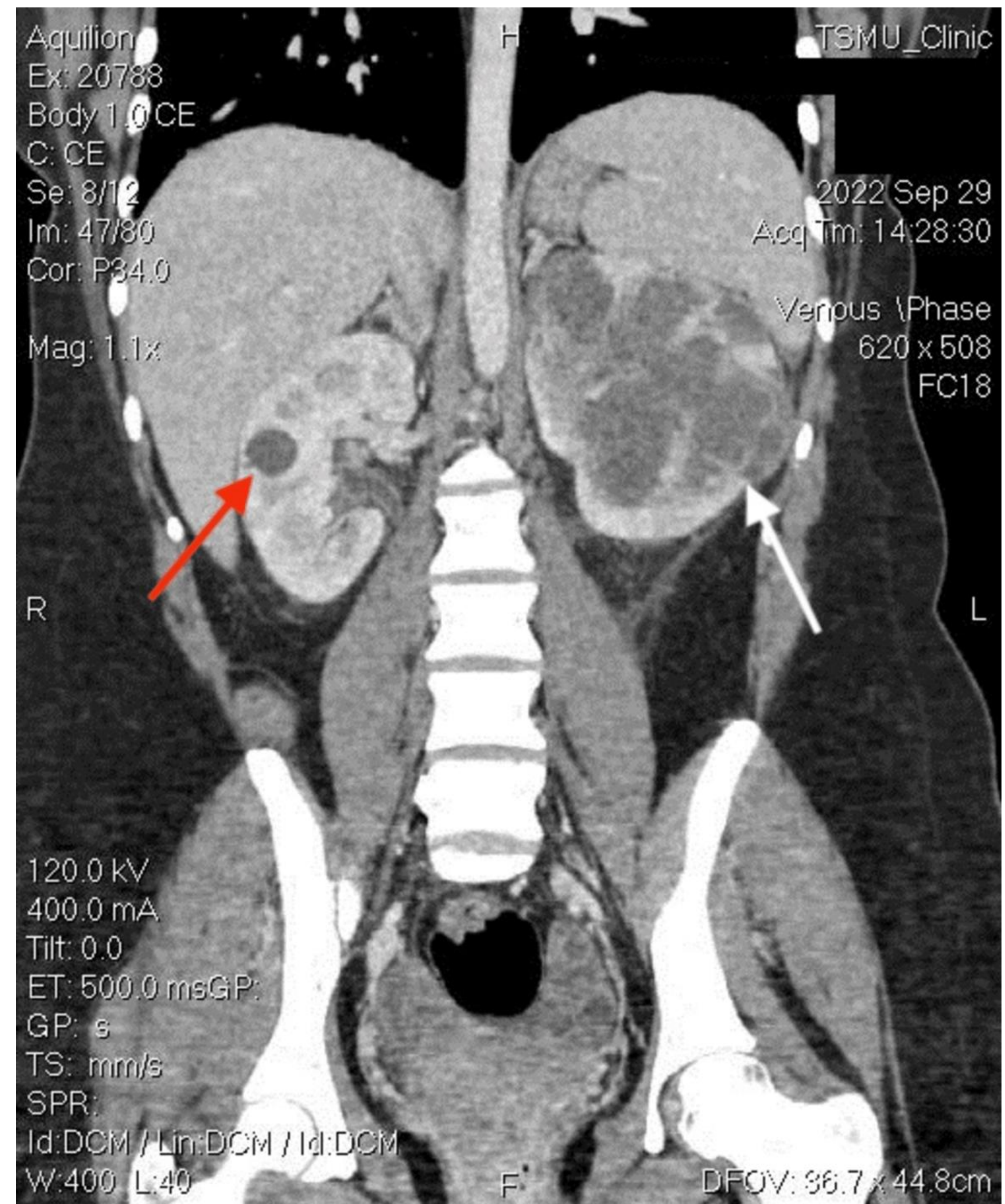
Atypiske nyrecyster

Sven Löffeler



56 år gammel mann

- 30.08.2021: Innlagt lokalsykehus med hø sidig flankesmerter, redusert AT, feberfølelse
- CT utredning viser atypisk cyste høyre nyre, 16 cm, Bosniak III
- 08.09.2021: MDT ved universitetssykehus anbefaler nyrereseksjon dersom mulig, eventuelt nefrektomi
- 11.10.2021: Innleggelse. Let ubehag fra flanken, forhøyet ALP 135
- 12.10.2021: Åpen operasjon

Bosniak klassifikasjon

BOSNIAK CLASSIFICATION SYSTEM OF RENAL CYSTIC MASSES

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CLASSIFICATION	DESCRIPTION	FEATURES	RISK OF MALIGNANCY	MANAGEMENT
I	Simple Cyst	Thin walled No septae, No calcifications, No enhancement	None	No Treatment
II	Simple Cyst	Few hair-line septae Fine calcifications May be high-attenuation cysts < 3cm	Minimal	No Treatment
II F	Minimally Complex Cyst	Multiple hairline septae Minimal smooth thickening of wall or septa. May have thick calcifications but no enhancement. cysts >3cm	3 - 10 %	Surveillance
III	Complex Cyst	Thicker or more irregular walls with measurable enhancement	50 %	Surgical Excision
IV	Clearly Malignant	Class III + enhancing soft-tissue components	75 - 90 %	Surgical Excision

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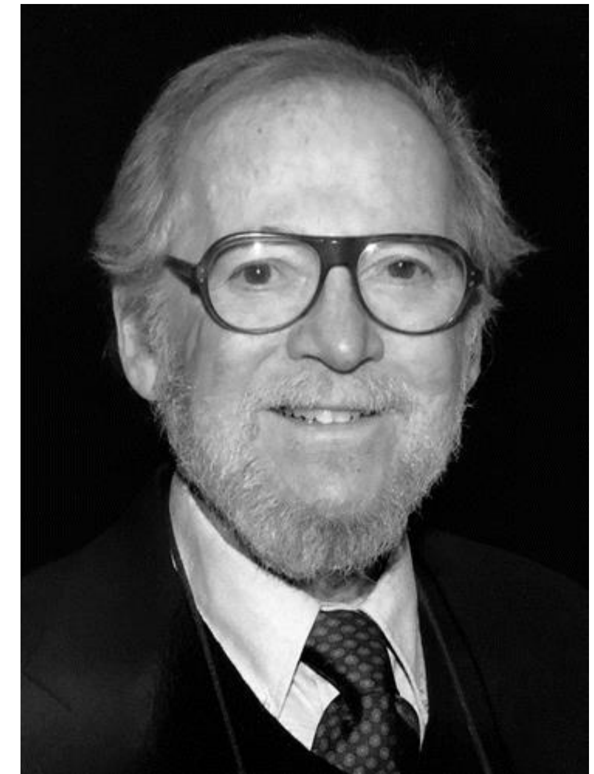
Morton A. Bosniak (1929-2016)



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UROLOGY - ORIGINAL PAPER

Long-term oncological outcomes of cystic renal cell carcinoma according to the Bosniak classification

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Boissier et al, 2019

- Bosniak II (6%), III (53%), IV (41%)

- mainly low grade (1–2,77%)
- low stage (pT1, 81%).
- Main histological subtypes were conventional (56%) and papillary (23%) RCC

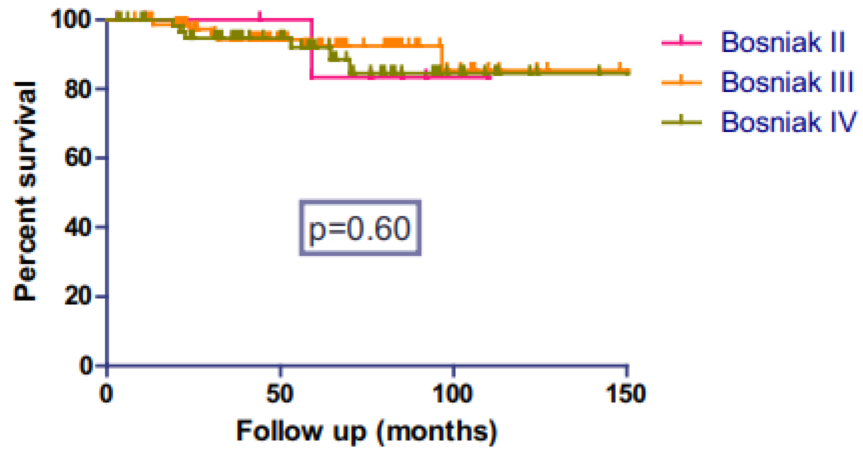

Fig. 1 Recurrence-free survival by Bosniak stratification

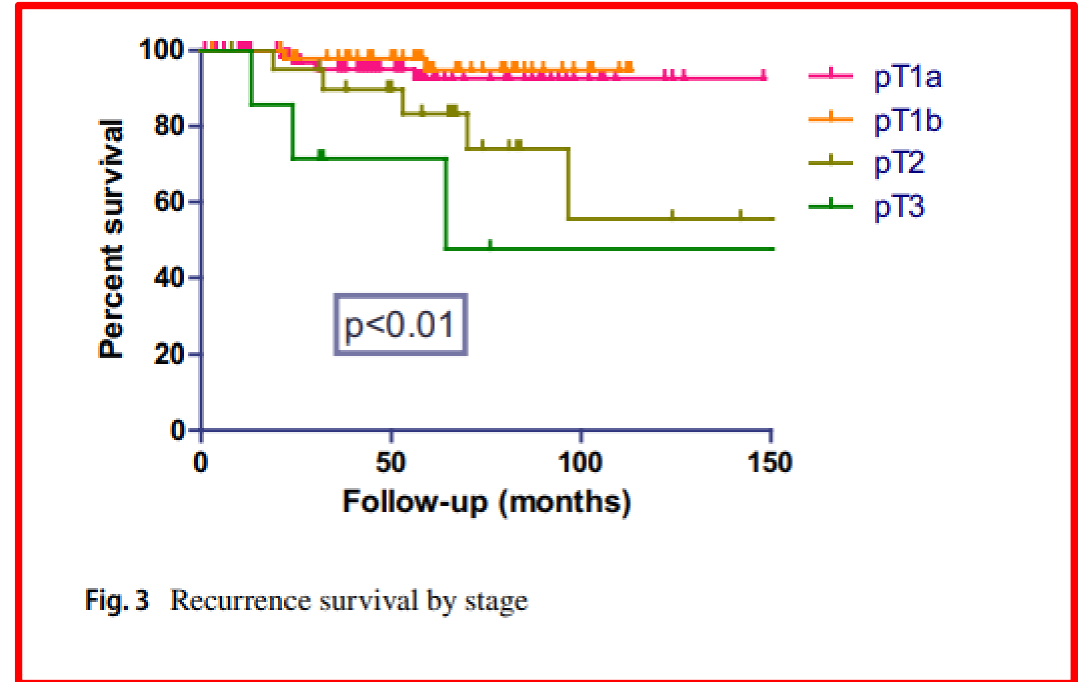

Fig. 3 Recurrence survival by stage

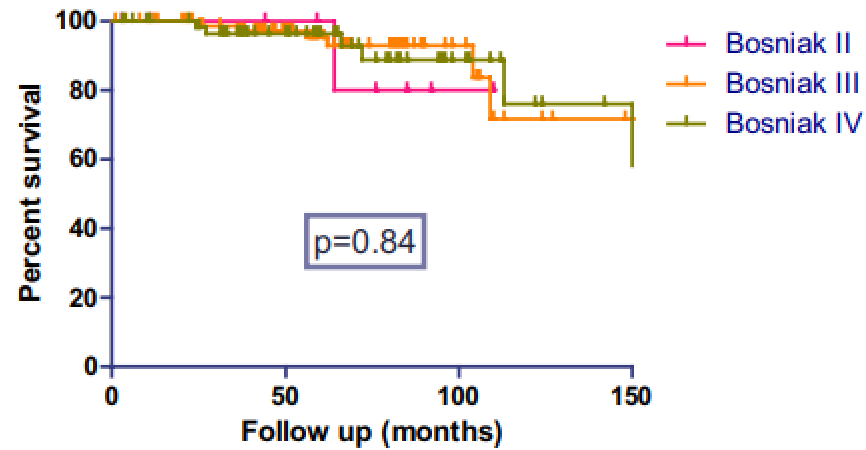

Fig. 2 Global survival by Bosniak stratification

Natural History of Complex Renal Cysts: Clinical Evidence Supporting Active Surveillance

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Purpose: We evaluated intervention rates, progression and cancer specific survival outcomes in patients with complex renal cysts in a single center experience.

Materials and Methods: We used the Montage™ radiology data mining system to retrospectively identify all reported cases of complex renal cyst at our institution from 2001 to 2013. The primary study end points were overall and cancer specific survival. The secondary end points included radiographic progression and upgrading, clinical progression and final histology on surgical pathology.

Results: We identified 336 patients with a complex renal cyst, of whom 185 (55.1%), 122 (36.3%) and 29 (8.6%) had Bosniak IIF, III and IV cysts, respectively. Median followup was 67.1 months (range 34.4 to 101.6). In the 332 patients with followup there was 1 cancer specific death (0.3%) and overall mortality was 6.2%. Ten (5.4%), 37 (30.3%) and 18 patients (62.1%) with Bosniak IIF, III and IV, respectively, underwent surgical or ablative intervention. The indication for intervention was predominantly age (intervention vs no intervention mean ± SD age 50.1 ± 15.9 vs 62.5 ± 13.9 years) and complexity. Surgery with radical and partial nephrectomy (23 patients or 35% and 37 or 57%, respectively) was most common and favorable final pathology was identified. Two treated patients experienced recurrence during followup. When excluding patients with von Hippel-Lindau syndrome, the cancer specific survival rate was 100%.

Conclusions: Cancer survival and overall survival in patients with Bosniak IIF to IV renal cysts was high with only 1 cancer specific death. No cancer deaths were recorded in patients who did not undergo intervention. Reconsidering management guidelines for complex renal cysts is warranted, particularly consideration for initial surveillance of Bosniak III cysts.

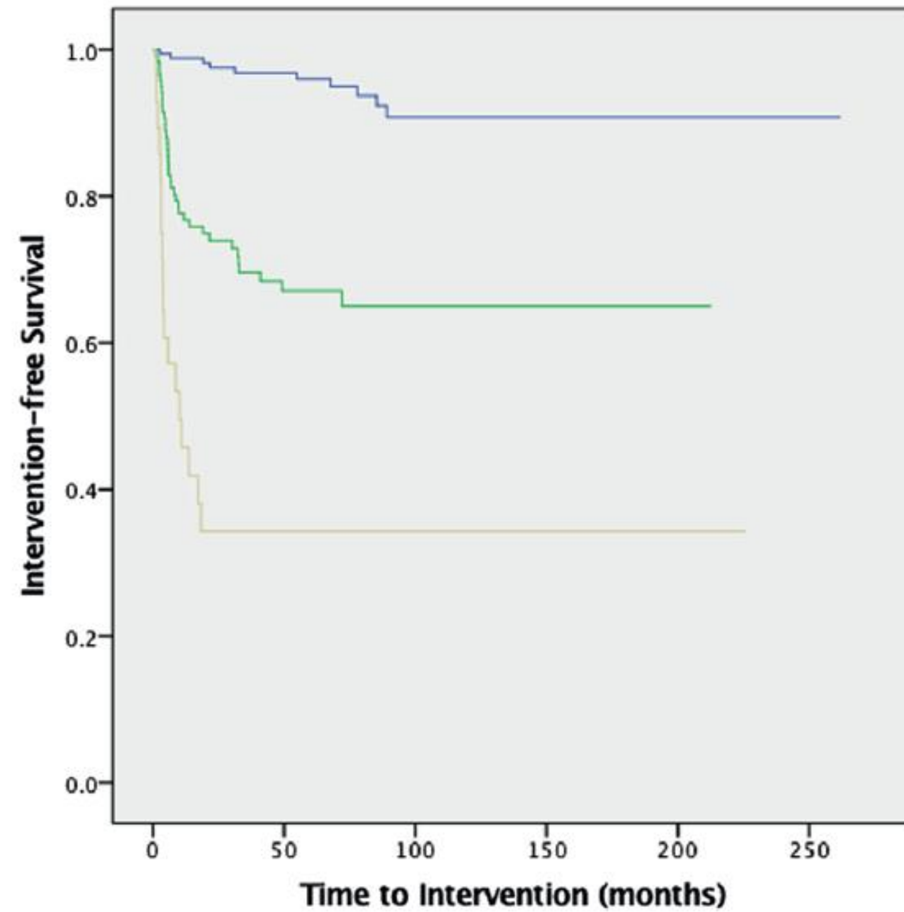

Figure 2. Intervention-free survival stratified by initial Bosniak classification, including Bosniak IIF (blue curve), III (green curve) and IV (yellow curve).

Helsedirektoratet

Nyrekreft – handlingsprogram

Nasjonal faglig retningslinje

Først publisert: 03. september 2015
Sist faglig oppdatert: 24. april 2023

Bosniak klassifikasjonen benyttes til å stratifisere risiko for malignitet ved atypiske cyster basert på bildediagnostiske trekk og ikke malignitetsgrad. Maligne cystiske tumorer oppfører seg oftest indolent (lavgradig og tidlig stadium) og er både overdiagnostisert og overbehandlet (Jhaveri et al., 2013; Silverman et al., 2019). Særlig Bosniak III gruppen er overbehandlet, da ca. 50 % er benigne. Sett i lys av dette og at denne gruppe har en meget bra prognose, er aktiv overvåking et godt alternativ til operasjon. Klassifikasjonen har vist seg mer nøyaktig for de øvrige gruppene (Schoots et al., 2017), men kan ikke fullstendig differensiere mellom aggres-sive og indolente tumorer og inkorporerer verken MR eller UL. Oppdatert Bosniak versjon 2019 inkluderer nå MR og anbefales tatt i bruk (Tse et al., 2020). Bosniak klassifisering skal ikke benyttes ved genetiske tilstander forbundet med økt risiko for nyrecellekarsinom.

56 år gammel mann med Bosniak III cyste

- 12.10.2021:
  - Gerotas fascien og peritoneum veldig fortykket over cysten. Forstørrete hilus LK → frysesnitt neg.
  - Trange og adherente forhold lateralt. Ved stump disseksjon perforasjon av cysten.
  - Lever adherent til Gerotas fascie → frysesnitt: malignitet.
  - Ytterligere cysteruptur med væskelekkasje → kontrollert tømming + sutur.
  - Videre med nefrektomi og leverreseksjon. Makroskopisk tumorfri.
- Histologi: papillær nyrecancer, type 2

56 år gammel mann med Bosniak III cyste

- Desember 2021: Innlagt akutt ved lokalsykehus med stikkende smerter i høyre fossa
- CT abdomen/ bekken:
  - Metastase interkostalt høyre side
  - Tumor ved caecum på 4 cm
  - Mistanke om bekkenkarsinomatose
- 06.01.2022: Ileus med anleggelse av ileostomi

Helsedirektoratet

Nyrekreft – handlingsprogram

Nasjonal faglig retningslinje

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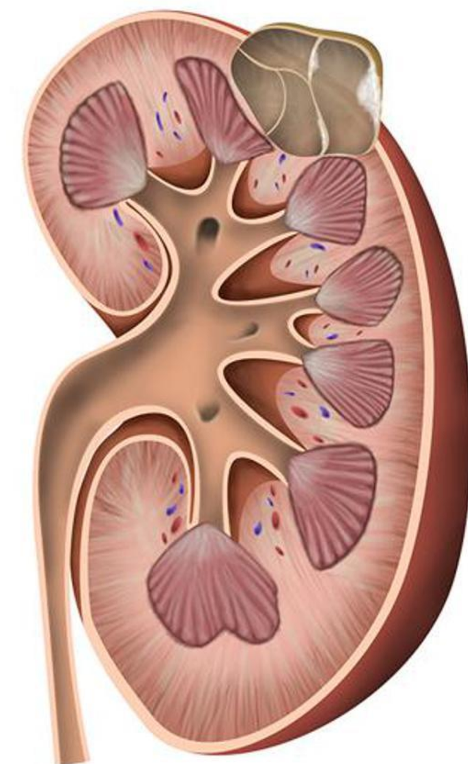

Kontroll av Bosniak cyster

Vanligvis kan kontroller avsluttes etter 5 år, men kontrollforløp for cystiske nyrelesjoner vurderes individuelt avhengig av alder og tilleggssykdommer:

Kontroller	
Bosniak I	Ingen kontroller
Bosniak IIF	1, 3 og 5 år. Hvis klassifikasjonen endres underveis følges pasienten videre i tråd med den nye klassifiseringen
Bosniak III	Vurderes for aktiv overvåking eller behandling
Bosniak IV	Vurderes for behandling

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181 BIIF cysts included for analysis, with a median follow-up of 50 months

Evolution of Bosniak IIF Renal Cysts and Impact of the 2019 Bosniak Classification

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Table 3. *Characteristics of Bosniak IIF Cysts With Radiological Progression on Follow-up, Based on the 2005 Bosniak Classification*

Age at progression, y	Time from diagnosis to progression, mo	Criteria for progression	Management
58	70	Thickened, enhancing cyst wall (BIII)	No intervention for 3 y, then radical nephrectomy (benign)
74	7	Thickened, enhancing septa (BIII)	Active surveillance (latest scan 94 mo after progression, classified as BIV, no cancer progression)
64	36	Soft tissue, enhancing nodule (BIV)	Active surveillance (latest scan 71 mo after progression, classified as BIV, no cancer progression)
62	10	Soft tissue, enhancing nodule (BIV)	Partial nephrectomy (papillary type 1 RCC, F2, pT1a)

Abbreviations: B, Bosniak; RCC, renal cell carcinoma.

Only 4 cysts (2.2%) progressed on follow-up

Table 4. *Effect of the 2019 Bosniak Classification on the Bosniak IIF Cysts in Our Cohort*

43 cysts would have met criteria for BIIF in new Bosniak classification

- Minimally thickened (3 mm), enhancing wall ($N = 2$)
- Smooth minimal thickening (3 mm) of at least 1 enhancing septum ($N = 36$)
- Many ($\geq$ 4) smooth thin ($\leq$ 2 mm) enhancing septa ($N = 5$)

138 cysts would have been classified as BII or BI

No cyst would have been classified as BIII or BIV

Only 1 of the cysts with progression would have been downgraded to BII (BIV on AS)

The only confirmed malignant cyst would have been classified the same way (BIIF then BIV)

- Many ($\geq$ 4) smooth thin ($\leq$ 2 mm) enhancing septa

Abbreviations: AS, active surveillance; B, Bosniak.