

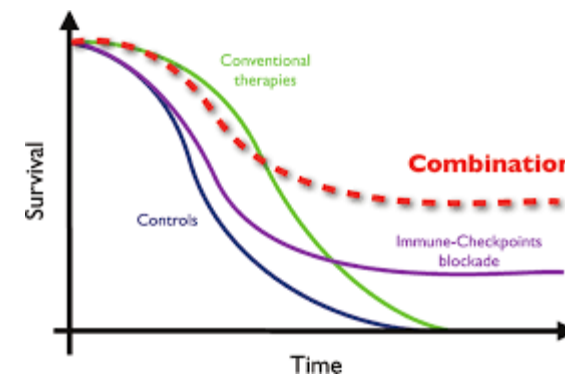
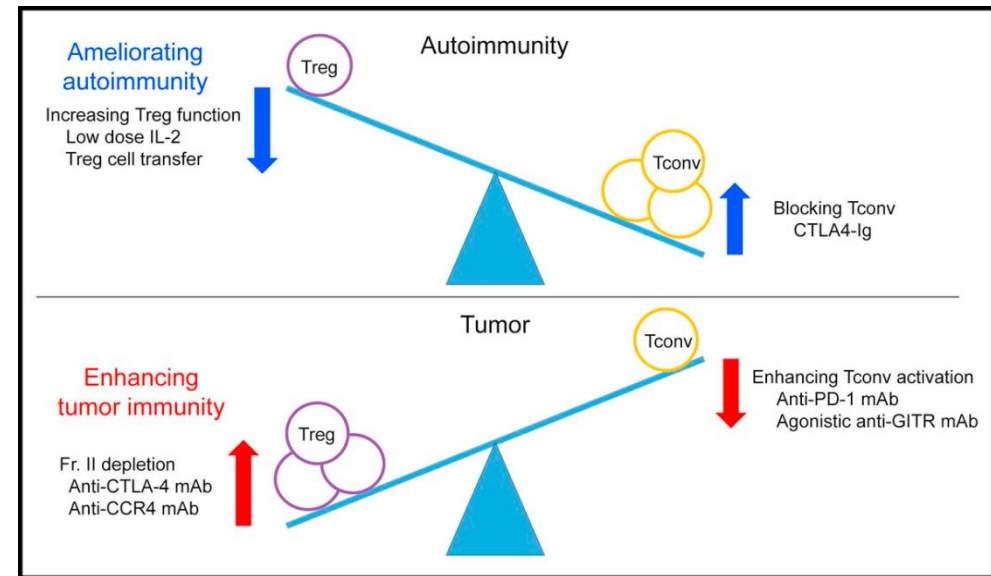
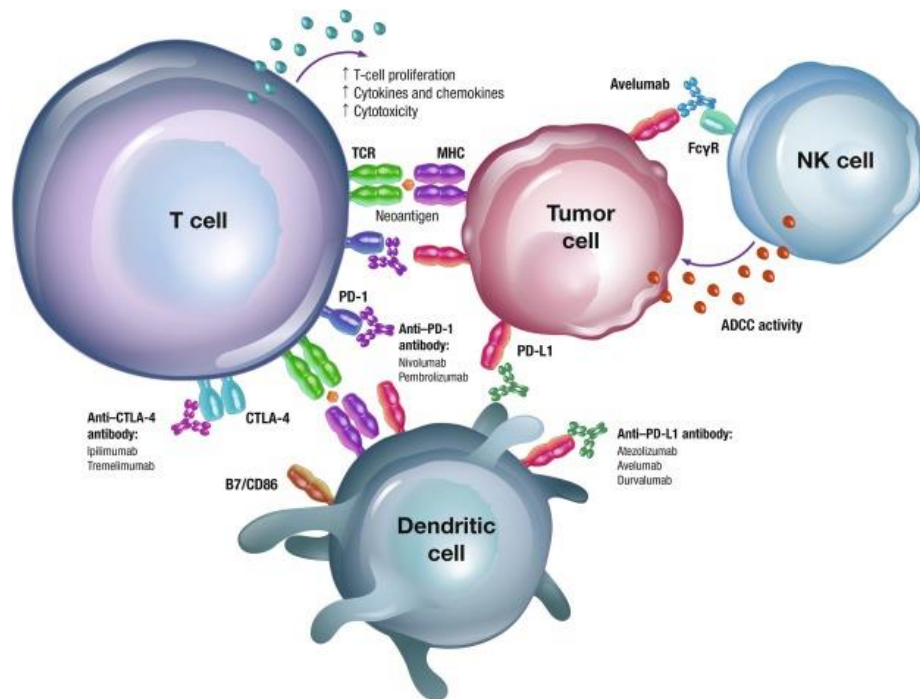
# Novinky v léčbě karcinomu močového měchýře z pohledu onkologa

Poprach A, Lakomý R

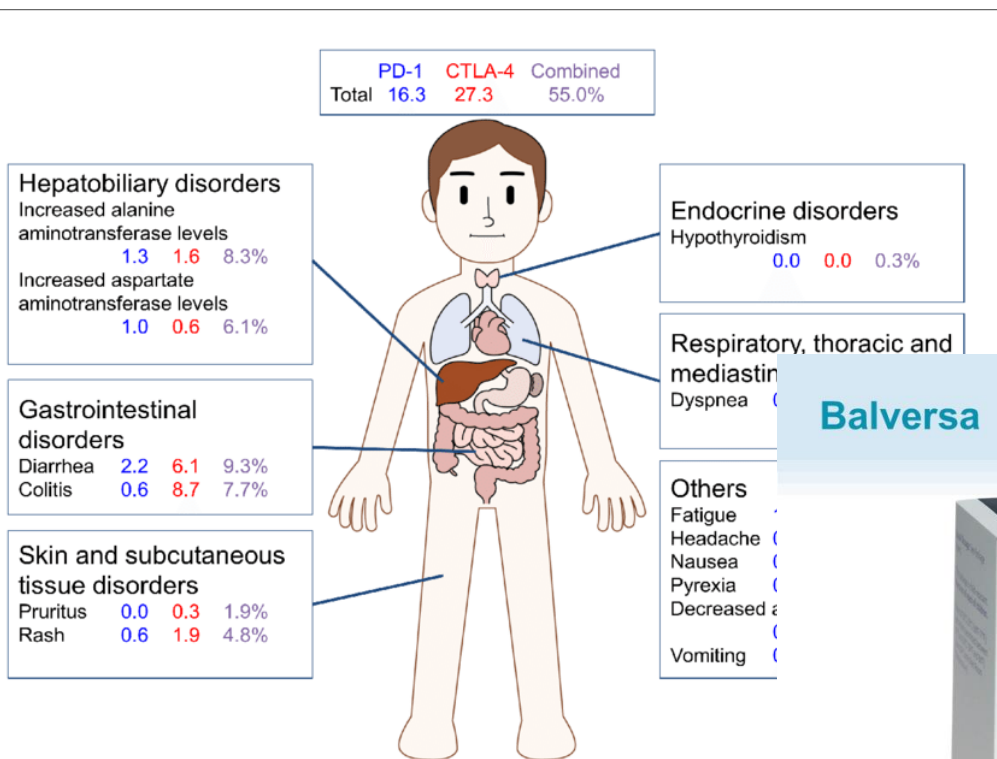
MOU a LF MU

09/2020

# Chemoterapie...stále základ naší léčby...ale imunoterapie bude budoucností



# Imunoterapie však přináší i rizika:

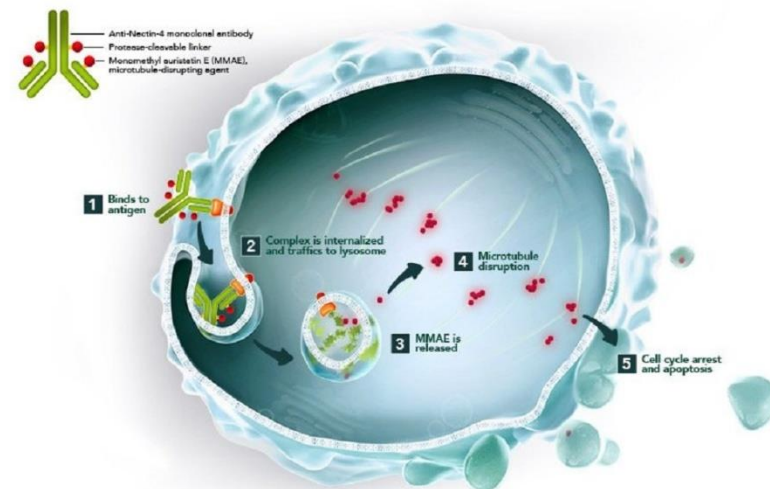


**Balversa**



**Vývoj však nepřináší jen imunoterapii**

**Enfortumab vedotin**



# T2-T4a a N1 (2,3) onemocnění

- (T1, Tis: při selhání BCG v USA... imunoterapie pembrolizumab...“ with BCG-unresponsive, high-risk, non-muscle invasive bladder cancer with Tis with or without papillary tumors who are ineligible for or have elected not to undergo cystectomy“ )
- Zpět k T2 onemocnění- základem onkologické léčby je neoadjuvance na bázi **CISPLATINY!!!**
- Preference DDP/Gem- 4x á 21 dní, nebo studie či DD M-VAC
- Cíl: downstaging tumoru a eradikace mikrometastáz
- **A poté RACE, nebo CHT/RT**

# Cisplatina „unfit“ vs. „fit“

ECOG PS  $\geq 2$

Clearance kreatininu  $<60\text{ml/min}$

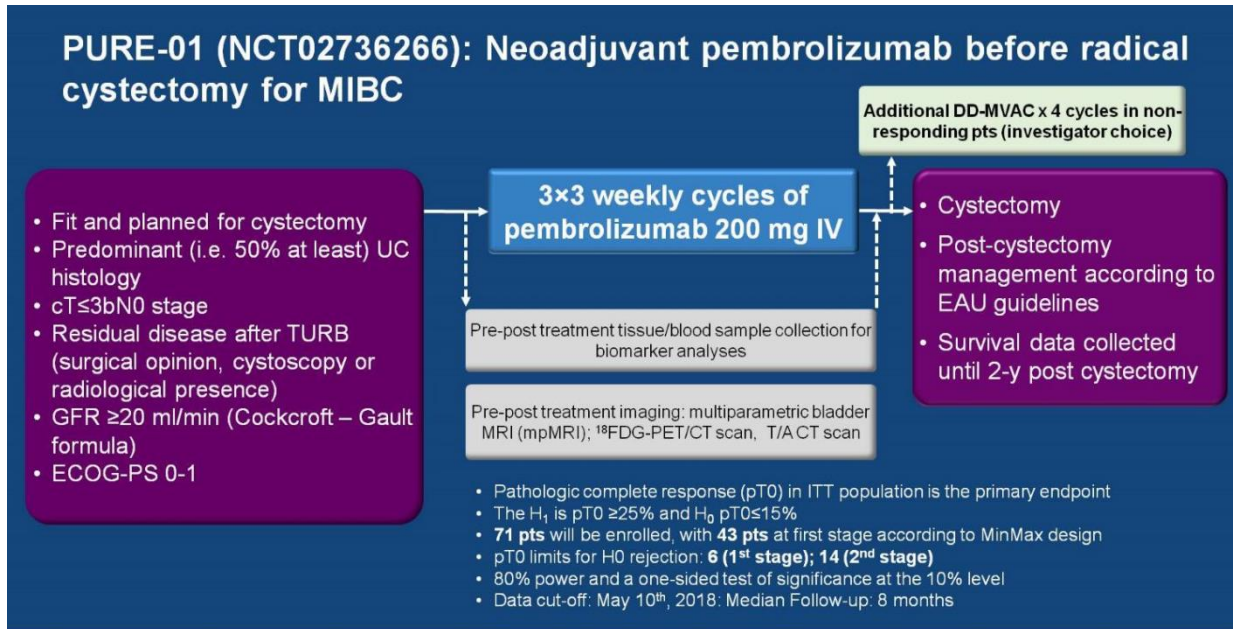
Neuropatie stupně  $\geq 2$

Srdeční selhání stupně III a více

Audiometrická ztráta sluchu stupně  $\geq 2$

# T2-T4a a N1 (2,3) onemocnění - budoucnost

- PURE-01 studie II.fáze



**Pathologic response to pembrolizumab**

	All treated patients N=43
Pathologic complete response, n (%), 95% CI	17 (39.5) 26.3–54.4
Secondary endpoint, n (%) Pathologic downstaging to pT<2	22 (51.2) (2 pTis; 2pTa; 1pT1)
Treatment failure, n (%)	
ypT2-4 ypN0	7 (16.3)
ypTany ypN+	9 (20.9)
“Clinical” failure (additional NAC*)	5 (11.6)
Clinical PD (RECIST v.1.1)	0 (-)

PRESENTED AT: 2018 ASCO ANNUAL MEETING #ASCO18  
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PRESENTED BY: ANDREA NECCHI

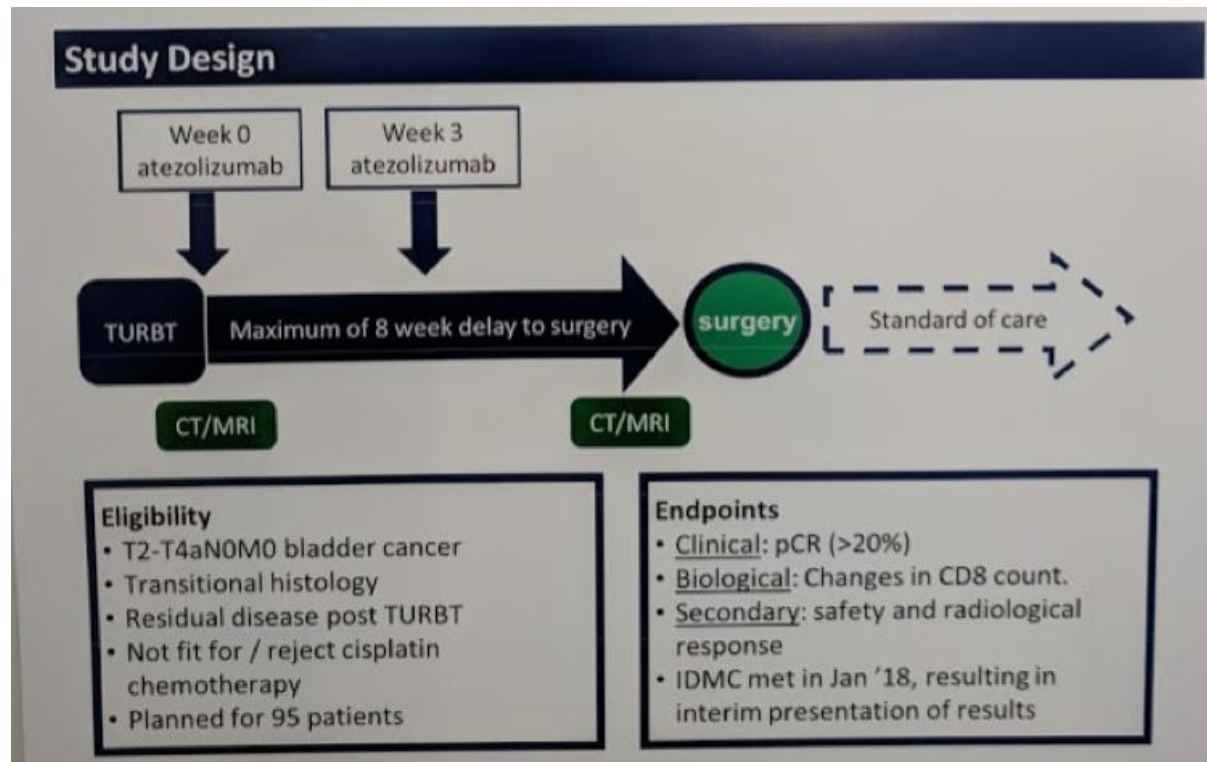
PRESENTED AT: 2018 ASCO ANNUAL MEETING #ASCO18  
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\*Pathologic response to Pembro>CT:  
• pTispN0: n=2 (40%); pT2pN2: n=1 (20%); pT3pN1: n=2 (40%)

# T2-T4a a N1 (2,3) onemocnění - budoucnost

- Studie ABACUS- II.fáze



# T2-T4a a N1 (2,3) onemocnění - budoucnost

Characteristic	Pembrolizumab (n = 43) <sup>[1]</sup>	Atezolizumab (n = 68) <sup>[2]</sup>
Eligibility criteria	T2-T3b; N1 allowed	T2-T4a; N0 only
Cisplatin eligible, %	100	0
Received neoadjuvant CT, %	12	0
Duration of neoadjuvant checkpoint inhibition	3 cycles (9 wks)	2 cycles (6 wks)
Safe	Yes	Yes
Pathological CR (pT0), %	40	29
Available biomarker data	Yes	Yes

pT0 Rates  
With CT:

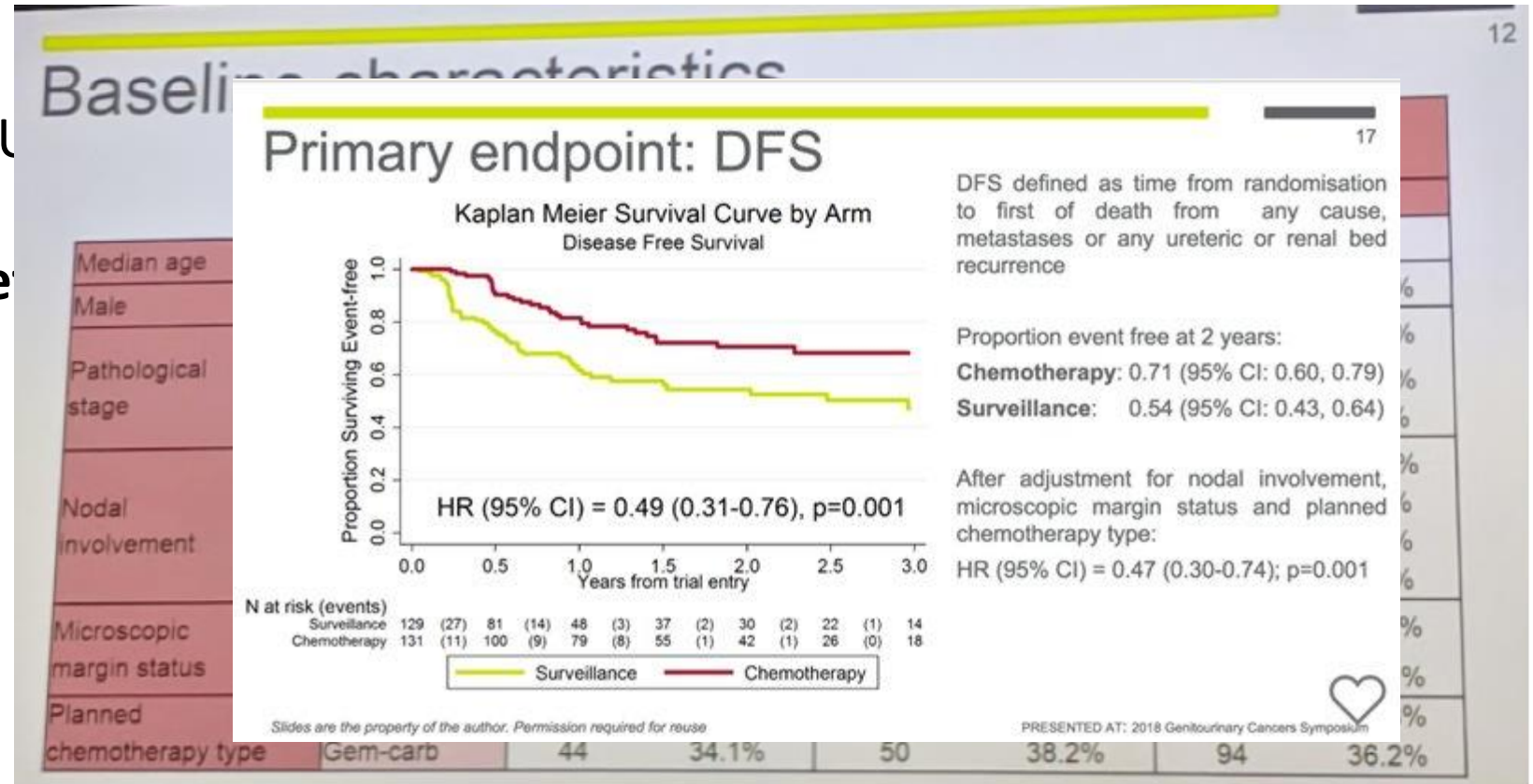
Gem/Cis,  
15% to 32%

DD MVAC,  
26% to 43%



# Co po RACE?

- Adjuvance...pT3-pT4, N+ a asi u lymfovaskulární invaze, pokud **nebyla podána** neoadjuvance (CISPLATINA)
- Studie **POUT!!!**:
  - Studie III. fáze UTU vs. sledování.
  - **DFS HR 0,47!; 2 le**



# Co po RACE?

- Novinka...zase imunoterapie...studie NIAGARA...durvalumab
  - Perioperační DDP/GEM+ durvalumab+ RACE+ následně durvalumab
- NABUCCO nivolumab a ipilimumab perioperační
- Atd...

# Metastatické postižení

- Nutné rozlišení cisplatina „unfit“ vs. „fit“ pacienti; a nově „unfit platina pacienti „
- Stanovení míry exprese PD-L1- bohužel různé metody
- **V první linii paliativní léčby:**
  - Pro pacienty **cisplatina fit: cisplatina+ gem**
  - **Cisplatina unfit: imunoterapie při pozitivě PD-L1 (pembro nebo atezolizumab),**  
...bohužel v ČR karboplatina/ gem
  - **Platina unfit: USA imunoterapie...v ČR...BSC?, monoterapie**

# První linie paliativní léčby mUC: cisplatina fit

	Sternberg 1989 <sup>1</sup>	Von Der Maase 2000, Roberts 2006 <sup>2,3</sup>	Sternberg 2006 <sup>4</sup>	Dreicer 2004 <sup>5</sup>	Kaufman 2000 <sup>6</sup>	EORTC 30987 <sup>7</sup>
<b>Therapies</b>	M-VAC*	GC* <sup>8</sup> vs M-VAC	DD-M-VAC* <sup>†</sup> vs M-VAC*	carbo/PTX vs M-VAC*	GC* <sup>8</sup>	PCG* <sup>§</sup> vs GC* <sup>8</sup>
<b>Phase</b>	2	3	3	3	2	3
<b>N</b>	133	405	263	85	46	626
<b>ORR, %</b>	72	49.4 vs 45.7 ( <i>P</i> =0.51)	64 vs 50 CR: 28 vs 12 pts ( <i>P</i> =0.06)	28.2 vs 35.9 CR: 1 vs 5 pts ( <i>P</i> =0.63)	41 CR: 10 pts	55.5 vs 43.6 ( <i>P</i> =0.0031)
<b>mPFS, mos</b>	8	7.7 vs 8.3 ( <i>P</i> =0.407)	9.5 vs 8.1 ( <i>P</i> =0.017)	5.2 vs 8.7 ( <i>P</i> =0.24)	5.5 <sup>  </sup>	8.3 vs 7.6 ( <i>P</i> =0.113)
<b>mOS, mos</b>	13.3	14 vs 15.2 ( <i>P</i> =0.66)	15.1 vs 14.9 (HR=0.76)	13.8 vs 15.4 ( <i>P</i> =0.65)	14.3	15.8 vs 12.7 ( <i>P</i> =0.075)
<b>5-yr OS, %</b>	18 (4-yr)	13 vs 15.3 ( <i>P</i> =0.526)	21.8 vs 13.5 ( <i>P</i> =0.042)	NR <sup>‡</sup>	NR	NR
<b>Grade 3-4 AEs (top 3), %</b>	Leukocyte count: 58 Nadir sepsis: 25 Platelets: 21	Neutropenia: 71.1 vs 82.3 Thrombocytopenia: 57 vs 20.6 Anemia: 27 vs 17.6	Platelets: 22 vs 17 WBC: 20 vs 62 Mucositis: 10 vs 17	Neutropenia: 29 vs 67 Anemia: 5 vs 38 Thrombocytopenia: 10 vs 21	Segmented neutrophils: 74 Platelet: 65 WBC: 53	Neutropenia: 64.3 vs 50.5 Thrombocytopenia: 34.5 vs 52.1 Hemoglobin: 22.5 vs 25.6
<b>AEs leading to discontinuation, %</b>	NA	NA	NA	9 vs 17	8	14.6 vs 15.7
<b>Tx-related death, n</b>	4	1% vs 3%	1 vs 1	1 vs 1	NA	6 vs 3

# První linie paliativní léčby mUC: cisplatina unfit- chemoterapie

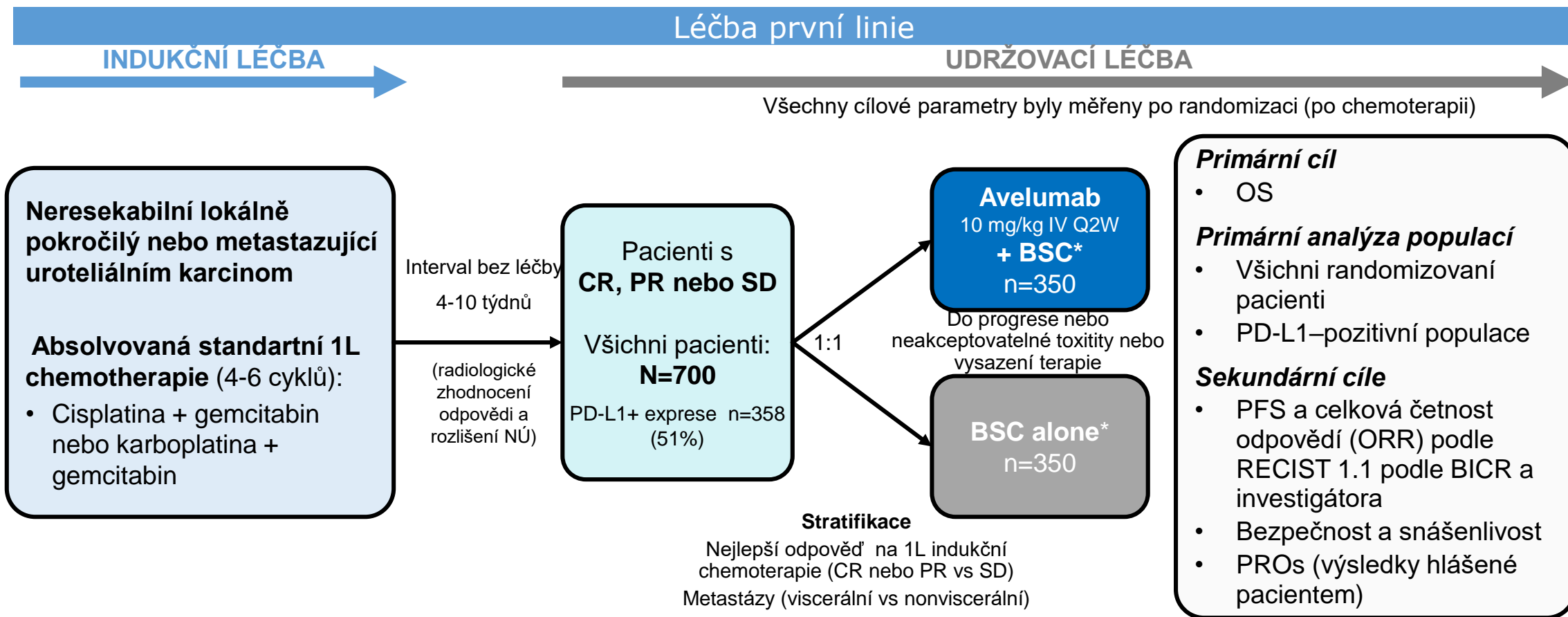
	EORTC 30986 <sup>1</sup>	Dreicer 2004 <sup>2</sup>	Galsky 2007 <sup>3</sup>
<b>Therapies</b>	GEM+carbo vs M-CAVI	carbo+PTX vs M-VAC	DOX+GEM → PTX+carbo
<b>Phase</b>	2/3	3	2
<b>N</b>	238	85	25
<b>ORR, %</b>	41.2 vs 30.3 ( <i>P</i> =0.08)	28.2 vs 35.9 CR:1 vs 5 pts ( <i>P</i> =0.63)	<b>56</b>
<b>mPFS, mo</b>	5.8 vs 4.2 (HR=1.04)	5.2 vs 8.7 ( <i>P</i> =0.24)	NR
<b>mOS, mo</b>	<b>9.3 vs 8.1</b> ( <i>P</i> =0.64)	<b>13.8 vs 15.4</b> ( <i>P</i> =0.65)	15
<b>5-yr OS, %</b>	NR	NR	NR
<b>Grade 3-4 AEs (top 3), %</b>	Neutropenia: 52.5 vs 63.5 Leucopenia: 44.9 vs 46.6 Thrombocytopenia: 48.3 vs 19.4	Neutropenia: 29 vs 67 Anemia: 5 vs 38 Thrombocytopenia: 10 vs 21	Neutropenia: 28 Anemia: 16 Thrombosis: 16 Thrombocytopenia: 8 Nausea: 8 Vomiting: 8
<b>AEs leading to discontinuation, %</b>	21.0 vs 21.8	9 vs 17	2
<b>Tx-related death, n</b>	2 vs 4	1 vs 1	NA

## PO CHT dle ASCO 2020:

# Udržovací léčba avelumab + nejlepší podpůrná léčba (BSC) versus BSC samotná po chemoterapii na bázi platiny v první linii pokročilého uroteliálního karcinomu:

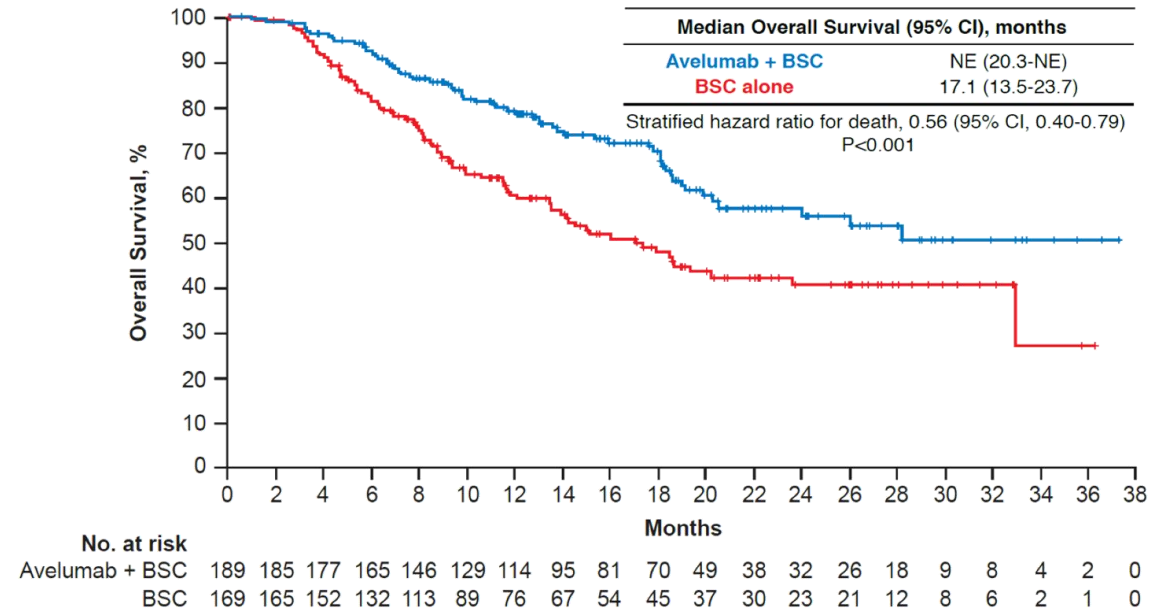
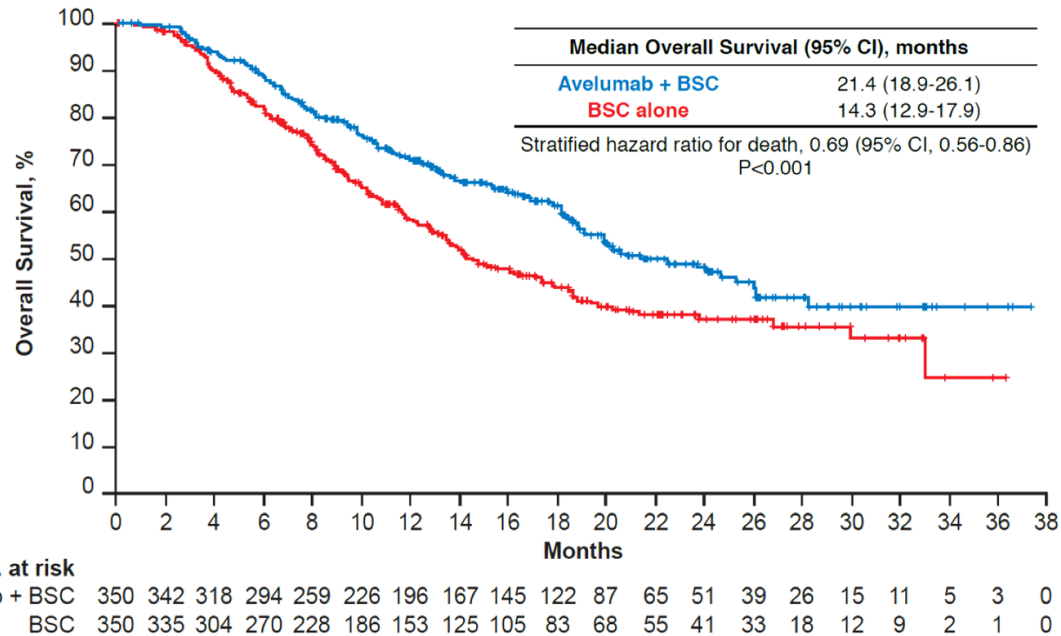
## JAVELIN Bladder 100 phase III výsledky

JAVELIN Bladder 100 režim



## OS v celkové populaci

## OS v PD-L1–pozitivní populaci



BAVENCIO je první imunoterapií, která v klinické studii s inovativním designem (indukce+ maintenance) prokázala statisticky významné zlepšení v parametru OS v léčbě první linie u pacientů s pokročilým uroteliálním karcinomem.

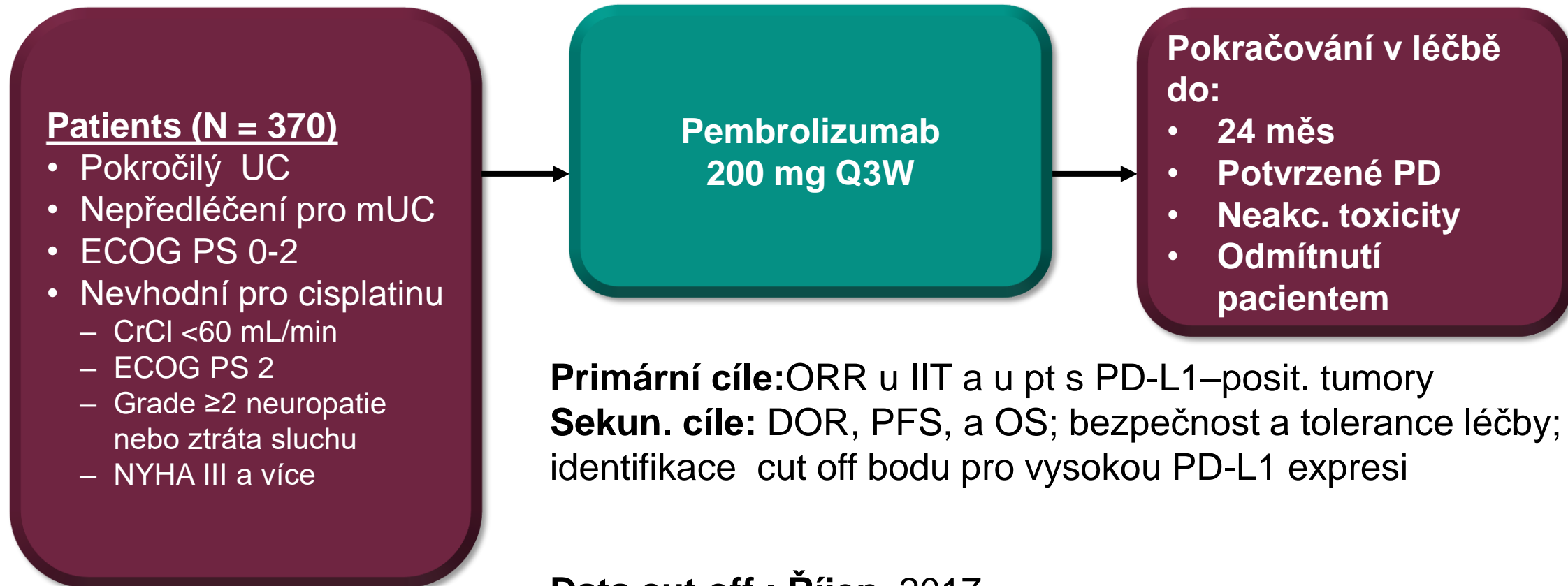
Režim dle designu studie Javelin Bladder 100 je aktuálně doporučený NCCN i ESMO.

# První linie paliativní léčby mUC: cisplatina unfit- imunoterapie

	KEYNOTE-052 <sup>1</sup>			IMvigor210 (Cohort 1) <sup>4</sup>		
Regimens	Pembrolizumab			Atezolizumab		
Ph	2 <sup>2</sup>			2		
N	370	251	110	119	32	80
Patient subgroups	Cisplatin-ineligible	PD-L1 CPS < 10	PD-L1 CPS ≥ 10	All-comers	PD-L1 expression of ≥5% in ICs	PD-L1 expression of ≥1% in ICs
ORR, % (95% CI)	<b>29</b> <b>(24–34)*</b>	21 (16–26)	47 (38–57)	<b>22.7</b> <b>(15.5–31.3)†</b>	<b>28.1</b> <b>(13.8–46.8)†</b>	<b>23.8</b> <b>(15.0–34.6)†</b>
mPFS, mo (95% CI)	2.3 (2.1–3.4)*	NA	NA	2.7 (2.1–4.2)†	4.1 (2.3–11.8)†	2.9 (2.1–5.4)†
mOS, mo (95% CI)	11.0 (10.0–13.6)*	10 (8–12)	19 (12–NR)	15.9 (10.4–NE)	12.3 (6.0–NE)	14.1 (9.2–NE)
Grade 3-4 AEs (top 3), %	NA <sup>3</sup>			Fatigue: 3, AST increased: 3, ALT increased: 3 <sup>5</sup>		
AEs leading to discontinuation, %	10 <sup>3</sup>			9 <sup>5</sup>		
Tx-related death, n	1 <sup>3</sup>			1 <sup>5</sup>		



# Nádory močového měchýře a pembrolizumab, první linie léčby mUC, KEYNOTE 052- studie II.fáze



**Primární cíle:** ORR u IIT a u pt s PD-L1–posit. tumory  
**Sekun. cíle:** DOR, PFS, a OS; bezpečnost a tolerance léčby; identifikace cut off bodu pro vysokou PD-L1 expresi

**Data cut off :** Říjen, 2017

**Medián follow-up:** 11.5 months (0.1 - 31.3 m)

# Nádory močového měchýře a pembrolizumab, první linie léčby mUC, KEYNOTE 052, charakteristika souboru pt

Characteristic, n (%)	N = 370
Age, median (range), y	74 (34-94)
≤64 years	68 (18)
65-74 years	123 (33)
75-84 years	139 (38)
≥85 years	40 (11)
Men	286 (77)
ECOG performance status <sup>a</sup>	
0	80 (22)
1	134 (36)
2	155 (42)
3	1 (<1)
Primary tumor location	
Upper tract	69 (19)
Lower tract	300 (81)
Metastases location <sup>c</sup>	
Lymph node only	51 (14)
Visceral disease	315 (85)
Liver metastases	77 (21)

Characteristic, n (%)	N = 370
Prior adjuvant/neoadjuvant platinum-based chemotherapy <sup>d</sup>	37 (10)
Reasons for cisplatin ineligibility	
Renal dysfunction	183 (50)
ECOG performance status 2	120 (32)
ECOG performance status 2 and renal dysfunction	34 (9)
Other reasons <sup>e</sup>	33 (9)

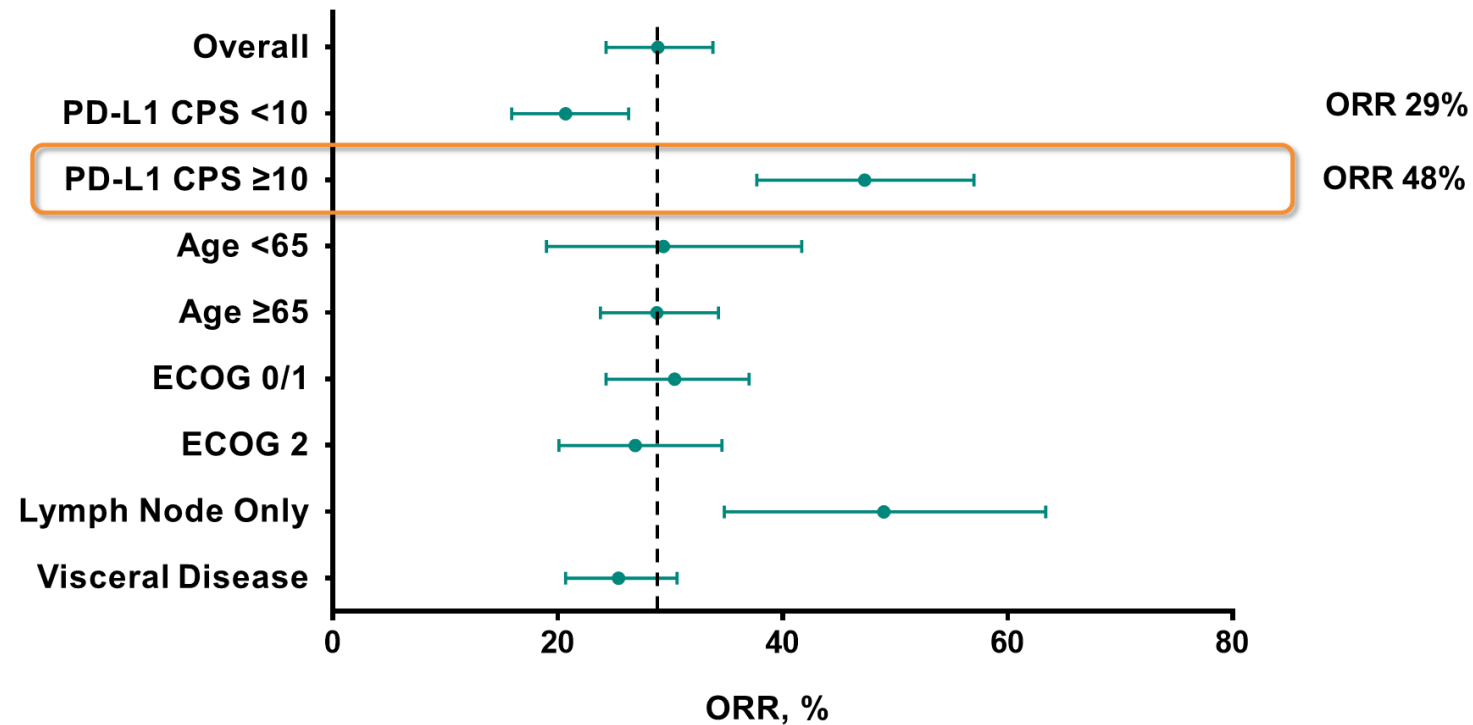
Characteristic, n (%)	N = 370
PD-L1 CPS ≥ 10	110 (32%)
PD- L1 CPS < 10	251 (68%)

# Nádory močového měchýře a pembrolizumab, první linie léčby mUC, KEYNOTE 052, ORR u IIT

Total Population		
	n	% (95% CI)
Objective response rate	107	<b>29%</b> (24.3-33.8)
Complete response	30	8 (5.5-11.4)
Partial response	77	21 (16.8-25.3)
Disease control rate	174	47 (41.8-52.3)
Stable disease	67	18 (14.3-22.4)
Progressive disease	<b>156</b>	42 (37.1-47.4)
No assessment	31	8 (5.8-11.7)
Not evaluable	9	2 (1.1-4.6)

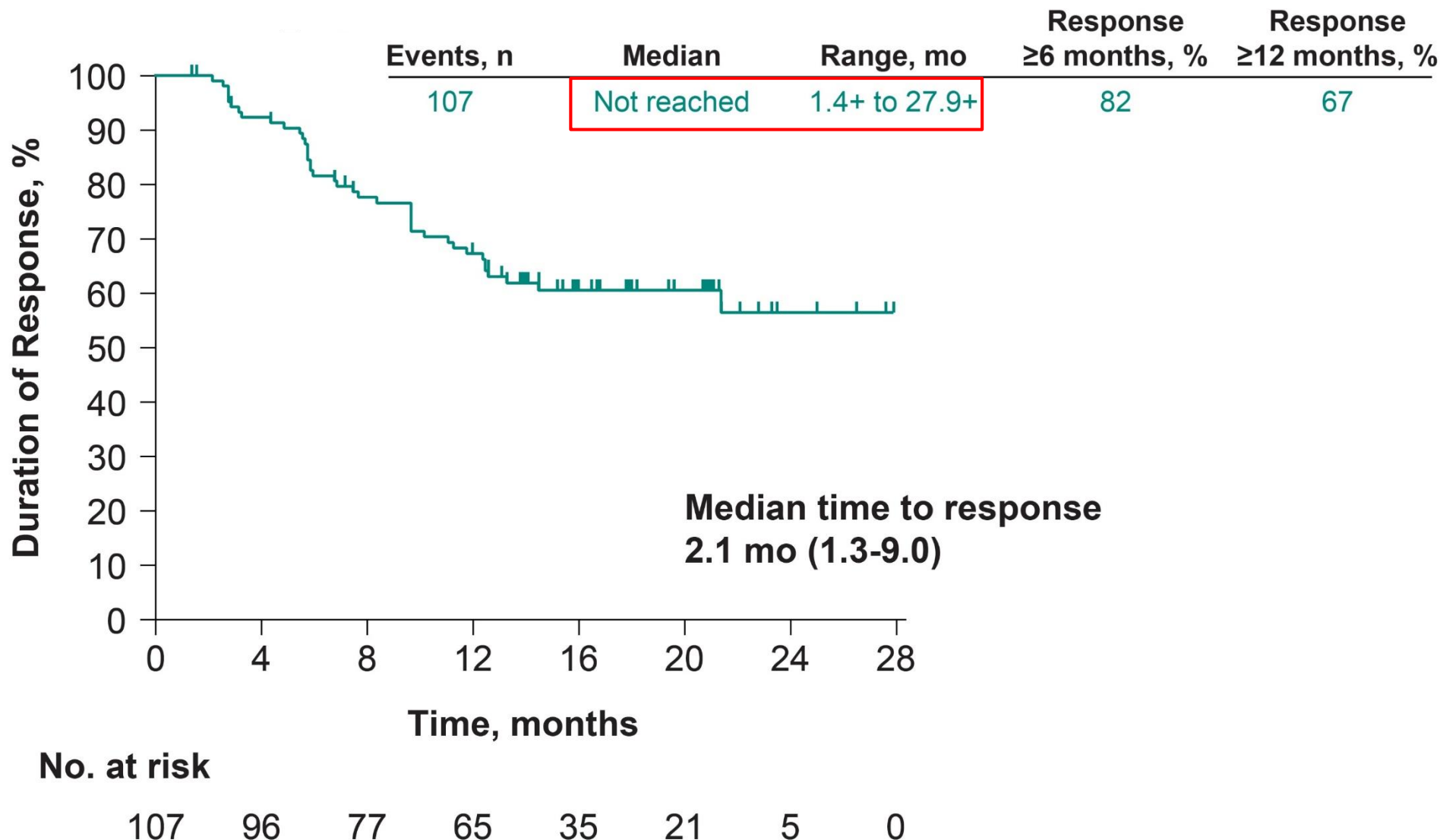
# Nádory močového měchýře a pembrolizumab, první linie léčby mUC, KEYNOTE 052, PD-L1 exprese a ORR

## ORR dle podskupin: PD-L1 CPS $\geq$ 10

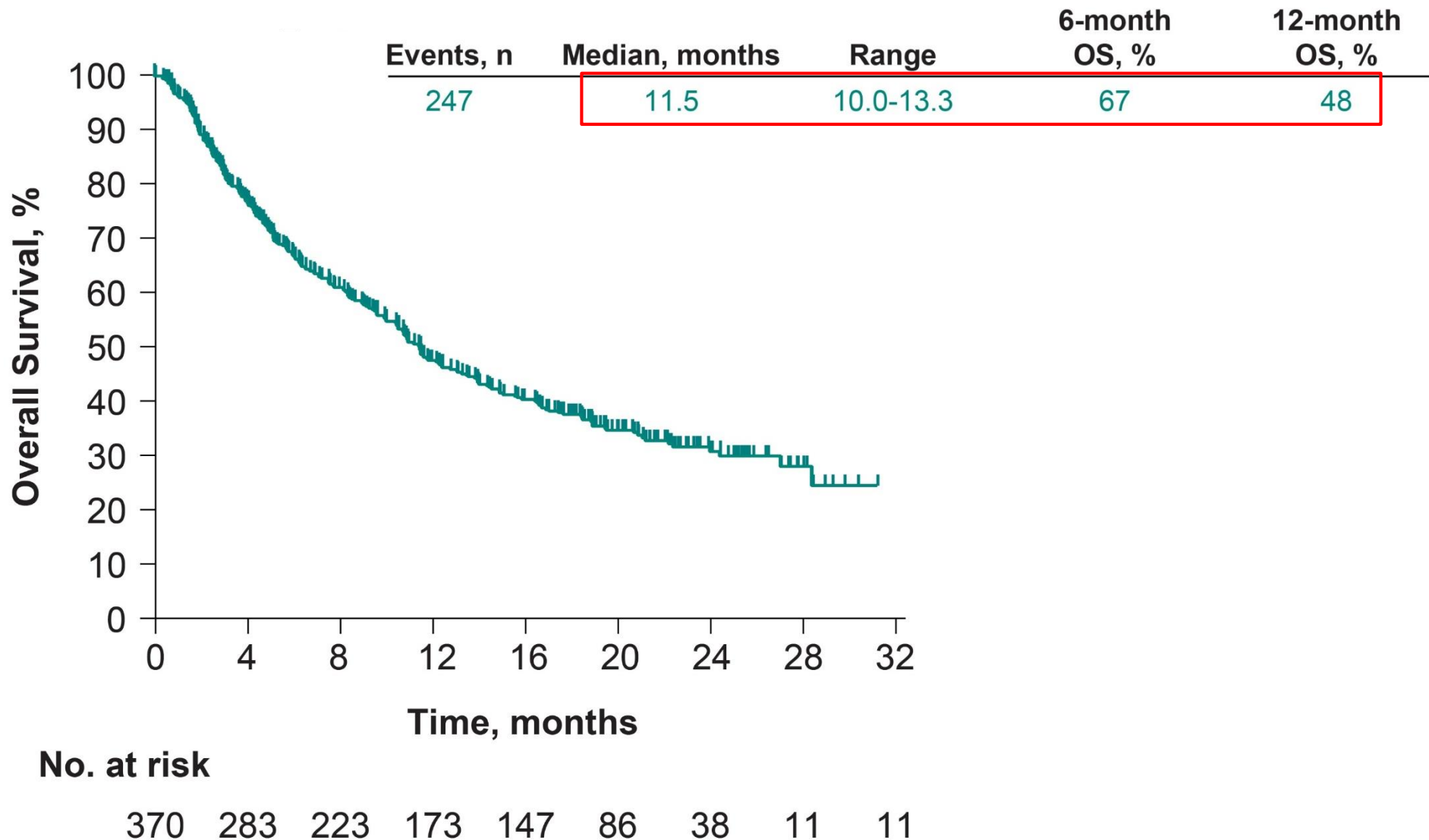


Data cutoff: Nov 30, 2017.

Nádory močového měchýře a pembrolizumab, první linie léčby mUC, KEYNOTE 052, DOR a doba do léčebné odpovědi



# Nádory močového měchýře a pembrolizumab, první linie léčby mUC, KEYNOTE 052, OS



# Nádory močového měchýře a pembrolizumab, první linie léčby mUC, KEYNOTE 052, OS dle podskupin

	N	Events, n (%)	Median OS (95% CI), months
<b>All patients</b>	370	247 (66.8)	11.5 (10.0-13.3)
<b>PD-L1 subgroup</b>			
PD-L1 CPS <10	251	186 (74.1)	10.0 (7.8-11.6)
<b>PD-L1 CPS ≥10</b>	<b>110</b>	<b>57 (51.8)</b>	<b>18.5 (12.2-NR)</b>
<b>Age</b>			
<65 years	68	41 (60.3)	15.7 (6.9-NR)
≥65 years	302	206 (68.2)	11.9 (9.7-12.8)
<b>ECOG performance status</b>			
0/1	214	134 (62.6)	13.1 (11.0-16.8)
2	156	113 (72.4)	9.7 (5.7-11.6)
<b>Metastases location</b>			
Lymph node only	51	22 (43.1)	NR (12.4-NR)
Visceral disease	315	223 (70.8)	10.8 (9.0-11.8)

# Nádory močového měchýře a pembrolizumab, první linie léčby mUC, NUL

	All n (%)	Grade 1 n (%)	Grade 2 n (%)	Grade 3 n (%)	Grade 4 n (%)
<b>Any</b>	<b>107 (29)</b>	<b>24 (9)</b>	<b>49 (13)</b>	<b>29 (8)</b>	<b>5 (1)</b>
Hypothyroidism	42 (11)	9 (2)	33 (9)	0	0
Pneumonitis	15 (4)	4 (1)	6 (2)	5 (1)	0
Hyperthyroidism	11 (3)	8 (2)	3 (<1)	0	0
Colitis	10 (3)	2 (<1)	2 (<1)	5 (1)	1 (<1)
Adrenal insufficiency	6 (2)	0	1 (<1)	3 (<1)	2 (<1)
Hepatitis	3 (<1)	0	0	3 (<1)	0
Thyroiditis	3 (<1)	0	2 (<1)	1 (<1)	0
Type 1 diabetes mellitus	3 (<1)	0	1 (<1)	2 (<1)	0
Autoimmune hepatitis	2 (<1)	0	0	2 (<1)	0
Dermatitis bullous	2 (<1)	1 (<1)	1 (<1)	0	0
Diabetic ketoacidosis	2 (<1)	0	0	1 (<1)	1 (<1)
Myocarditis	2 (<1)	0	0	1 (<1)	1 (<1)
Pruritus	2 (<1)	0	0	2 (<1)	0
Rash	2 (<1)	0	0	2 (<1)	0
Tubulointerstitial nephritis	2 (<1)	0	0	2 (<1)	0



# Druhá a vyšší linie paliativní léčby

- Taxany, vir
- Chemoter

**Table 1. Vinflunin**

Observations reporting on clinical outcome of VFL in daily clinical practice since the drug's approval in 2009.

Author	Number of observed patients	OS/PFS (months)
<a href="#">Pistamaltzian et al. [2016]</a>	n = 71, retrospective study	11.9/6.9
<a href="#">Moriceau et al. [2015]</a>	n = 19, retrospective study	4.0/2.9
<a href="#">Medioni et al. [2016]</a>	n = 134, retrospective study	8.2/4.2
<a href="#">Hegele et al. [2014]</a>	n = 21, retrospective study	6.2/4.4
<a href="#">Retz et al. [2015]</a>	n = 77, prospective study	7.7/-
<a href="#">Castellano et al. [2014]</a>	n = 102, prospective study	10.0/3.9
<a href="#">Palacka et al. [2014]</a>	n = 16, prospective study	5.2/2.3
Summarized	n = 440, prospective and retrospective observations	7.6/4.1
<a href="#">Belmunt et al. [2009]</a>	n = 259, phase III trial	6.9/3.0

Odpovědi na léčbu: PR  
8,6%, SD 46%

OS, overall survival; PFS, progression-free survival.

Regimens
Ph
N
ORR, %
mPFS, mo
mOS, mo
Grade 3-4 AEs (top 3), %
AEs leading to discontinuation, %
Tx-related death, n

e)
0

# Druhá a vyšší linie paliativní léčby

- Taxany, vinflunin a zase IMUNOTERAPIE
- **Imunoterapie:** pembrolizumab, atezolizumab, nivolumab ... a další

	KEYNOTE-045 <sup>1,2,3</sup>			IMvigor210 (cohort 2) <sup>4,5</sup>			CheckMate 275 <sup>6,7</sup>			Study 1108 <sup>8,9</sup>			JAVELIN <sup>10</sup>		
Regimens	Pembrolizumab vs chemotherapy			Atezolizumab			Nivolumab			Durvalumab			Avelumab <sup>††</sup>		
Ph	3			2			2			1/2			1		
N	270 vs 272			310			270			191			161		
Patient subgroups	ITT population	PD-L1 CPS < 10	PD-L1 CPS ≥ 10	All-comers	PD-L1 expression of ≥ 5% in ICs	PD-L1 expression of ≥ 1% in ICs	All-comers	Tumor PD-L1 expression of < 1%	Tumor PD-L1 expression of ≥ 1%	All-comers	PD-L1 expression of ≥ 1% in ICs	PD-L1 low or negative	All-comers	PD-L1 expression of ≥ 5% in ICs	PD-L1 expression of < 5% in ICs
ORR, % (95% CI)	21.1* vs 11.4* (P <sup>†</sup> =0.001)	NA <sup>1</sup>	21.6 vs 6.7 <sup>3</sup>	15.8 (11.9, 20.4)	28.0 (19.5, 37.9)	19.3 (14.2, 25.4)	20 (16, 26)	16 (10, 23)	26 (18, 34)	17.8 (12.7, 24.0)	27.4 (18.7, 37.5)	4.1 (0.9, 11.5)	17 (11, 24)	24 (14, 36)	13 (7, 23)
mPFS, mo (95% CI)	2.1* vs 3.3* (P <sup>†</sup> =0.416) (HR <sup>§</sup> =0.98)	NA <sup>1</sup>	NA <sup>1</sup>	NA <sup>3</sup>			2.0 (1.9, 2.6)	1.9 (1.8, 2.0)	3.6 (1.9, 3.7)	1.5 (1.4, 1.9)	2.1 (1.4, 2.8)	1.4 (1.3, 1.5)	6.3wks (6.0, 10.1)	11.9 wks (6.1, 18.0)	6.1 wks (5.9, 8.0)
mOS, mo (95% CI)	10.3 vs 7.4 (P <sup>†</sup> =0.002) (HR <sup>§</sup> =0.73)	NA <sup>**</sup>	NA <sup>**</sup>	NA <sup>3,4††</sup>			8.6 (6.05, 11.27)	5.9 (4.37, 8.08)	11.6 (9.10, NE)	18.2 (8.1, NE)	20.0 (11.6, NE)	8.1 (3.1, NE)	6.5 (4.8, 9.5)	8.2 (5.7, 13.7)	6.2 (4.3, 14.0)
Grade 3-4 TRAEs, %	Grade 3-5: 15.0 vs 49.4			16			23			6.8			8		
TRAEs leading to discontinuation, %	5.6 vs 11.0			NA			NA			1.6			6		
Tx-related death, n	1.5 vs 1.6			0			1			1			<1		

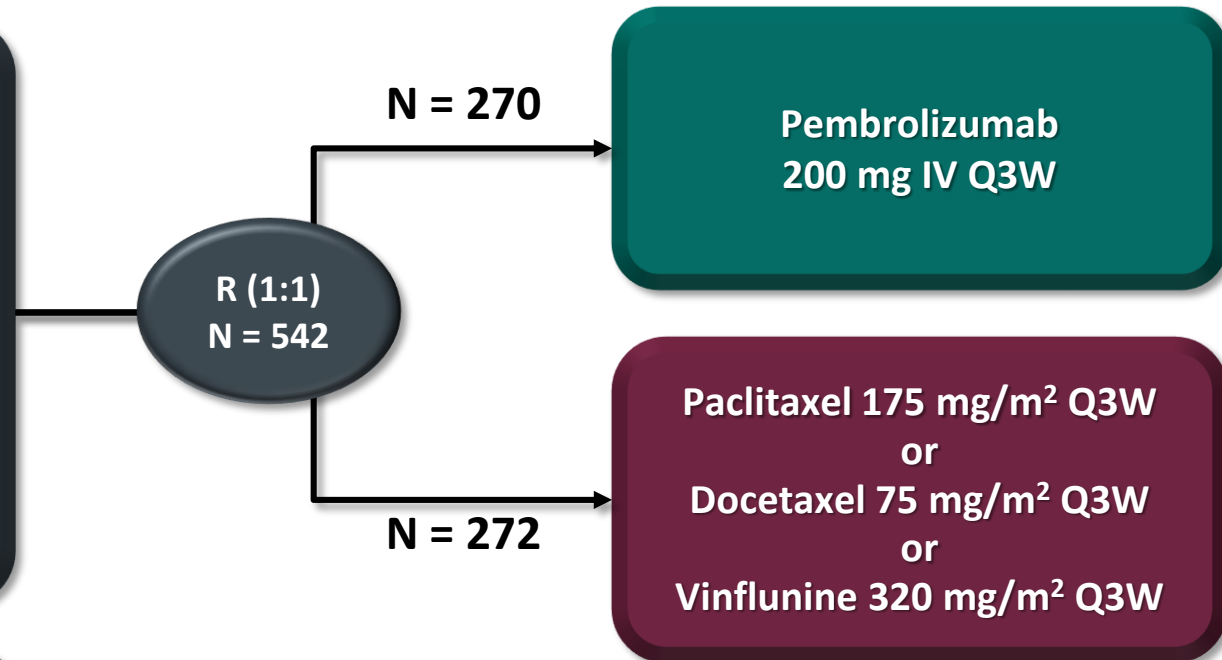
# Nádory močového měchýře a pembrolizumab, druhá linie léčby mUC, KEYNOTE 045, design studie- III.fáze

## Key Eligibility Criteria

- Urothelial carcinoma of the renal pelvis, ureter, bladder, or urethra
- Transitional cell predominant
- PD after 1 or 2 lines of platinum-based chemotherapy or recurrence <12 months after perioperative platinum-based therapy
- ECOG performance status 0-2
- Tumor sample for biomarker assessment<sup>a</sup>

## Stratification Factors

- ECOG performance status (0/1 vs 2)
- Hemoglobin level (<10 vs ≥10 g/dL)
- Liver metastases (yes vs no)
- Time from last chemotherapy dose (<3 vs ≥3 months)



- Dual primary end points: OS and PFS<sup>b</sup>
- Key secondary end points: ORR, DOR, safety
- Response: RECIST v1.1 by blinded, independent central review
- Unselected and biomarker-selected patients
- Data cutoff for this analysis was October 26, 2017

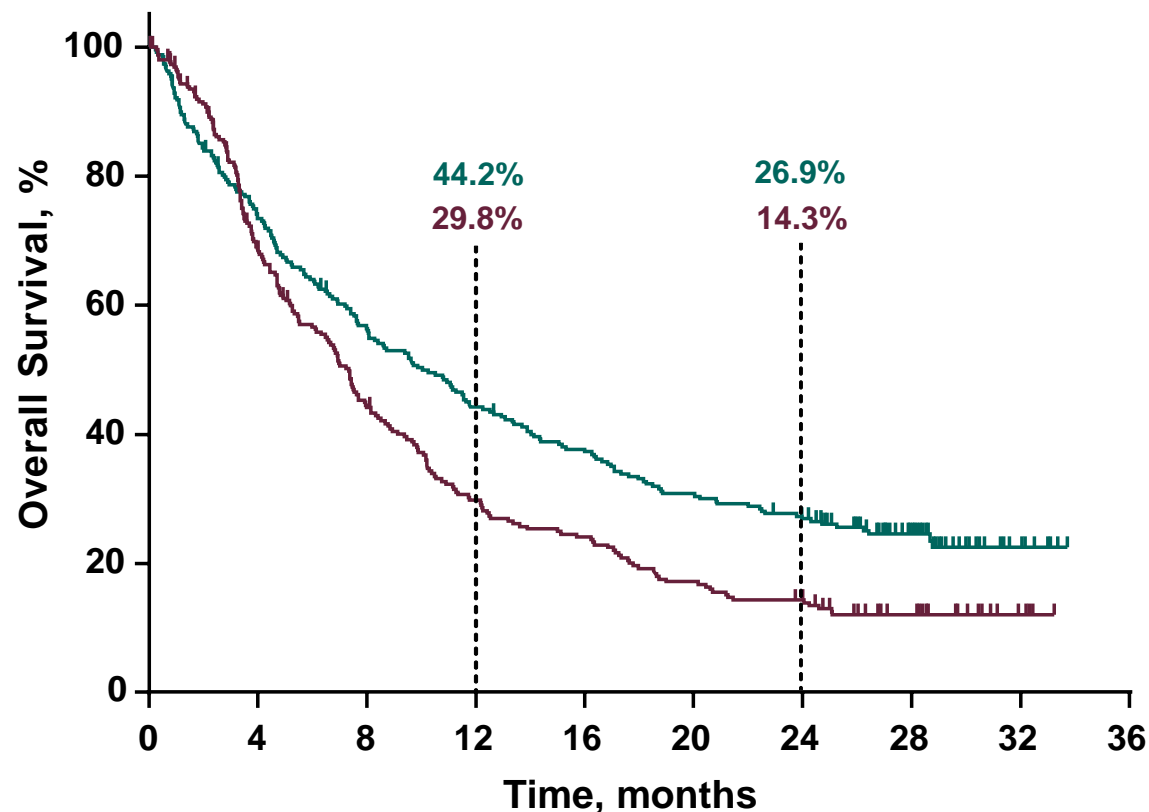
• **Median follow-up, 27.7 months**

## Nádory močového měchýře a pembrolizumab, druhá linie léčby mUC, KEYNOTE 045, charakteristika souboru

n (%)	Pembro N = 270	Chemo N = 272
Age, median (range), y	66 (29-88)	65 (26-84)
Men	200 (74.1)	202 (74.3)
Upper tract disease	38 (14.1)	37 (13.6)
Lower tract disease	232 (85.9)	235 (86.4)
ECOG performance status <sup>a</sup>		
0	120 (44.4)	106 (39.0)
1	142 (52.6)	158 (58.1)
2	3 (1.1)	4 (1.5)
Visceral disease	241 (89.3)	235 (86.4)
Disease in lymph node only	28 (10.4)	37 (13.6)
Liver metastases	91 (33.7)	95 (34.9)
Hemoglobin <10 g/dL <sup>b</sup>	43 (15.9)	44 (16.2)
PD-L1 CPS ≥10	74 (27.4)	90 (33.1)

n (%)	Pembro N = 270	Chemo N = 272
Time since completion of most recent therapy		
≥3 months	167 (61.9)	168 (61.8)
<3 months	103 (38.1)	104 (38.2)
Setting of most recent therapy		
Neoadjuvant	19 (7.0)	22 (8.1)
Adjuvant	12 (4.4)	31 (11.4)
First line	184 (68.1)	158 (58.1)
Second line	55 (20.4)	59 (21.7)
Third line	0	2 (0.7)
Risk factors <sup>c</sup>		
0	54 (20.0)	45 (16.5)
1	97 (35.9)	97 (35.7)
2	66 (24.4)	80 (29.4)
3/4	45 (16.7)	45 (16.5)

# Nádory močového měchýře a pembrolizumab, druhá linie léčby mUC, KEYNOTE 045, OS



	Events, n	HR (95% CI) <sup>a</sup>	<i>P</i> <sup>b</sup>
Pembro	200	0.70 (0.57-0.85)	0.00015
Chemo	219		

Median (95% CI):

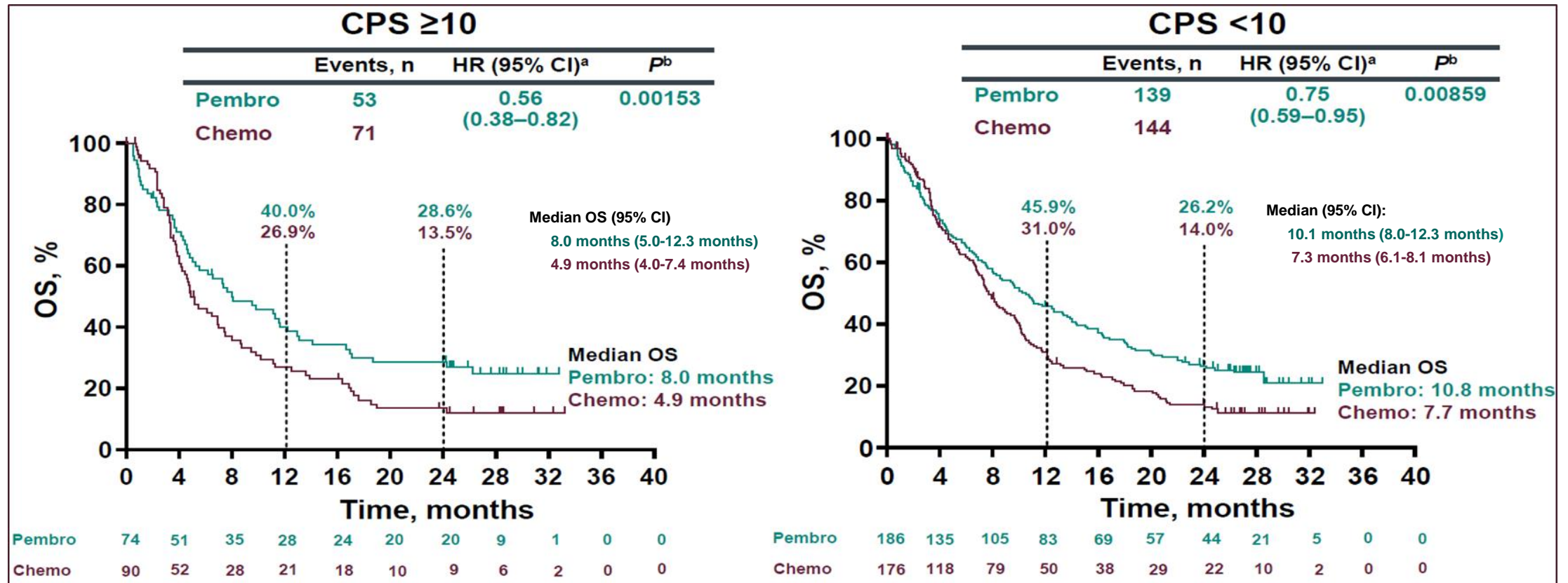
10.1 months (8.0-12.3 months)  
7.3 months (6.1-8.1 months)

- 60.6% pacientů v rameni s chemoterapií bylo následně léčeno anti PD-1/PD-L1 léčbou (přeživší 24 měsíců a více)

No. at risk

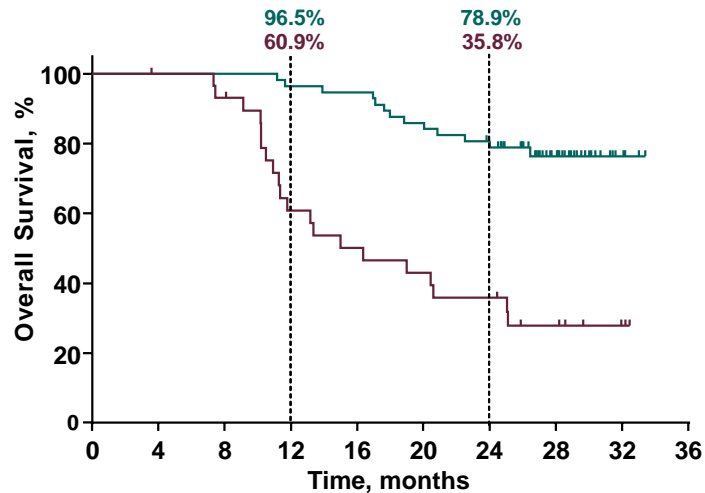
Pembrolizumab	270	195	148	116	98	80	67	33	7	0
Chemotherapy	272	173	109	73	59	42	34	18	4	0

# Nádory močového měchýře a pembrolizumab, druhá linie léčby mUC, KEYNOTE 045, OS dle PD-L1



# Nádory močového měchýře a pembrolizumab, druhá linie léčby mUC, KEYNOTE 045, OS dle odpovědi na léčbu

**Responders  
CR + PR (N = 87)**



No. at risk	0	4	8	12	16	20	24	28	32	36
Pembrolizumab	57	57	57	55	54	49	43	22	4	0
Chemotherapy	30	29	27	17	14	12	10	6	2	0

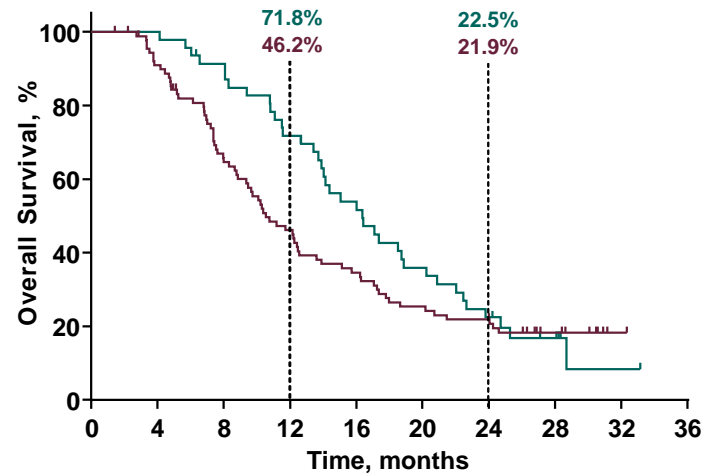
## Median OS

**Pembro: NR (95% CI, NR–NR)**

**Chemo: 16.4 months (95% CI, 11.3-25.1 months)**

**HR: 0.14 (95% CI, 0.06-0.33), P < 0.00001**

**SD (N = 139)**



No. at risk	0	4	8	12	16	20	24	28	32	36
Pembrolizumab	47	47	42	33	24	16	10	5	1	0
Chemotherapy	92	81	56	40	30	22	19	9	1	0

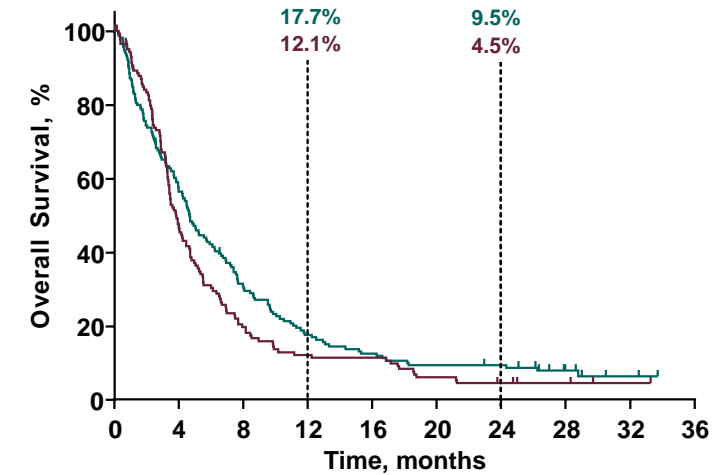
## Median OS

**Pembro: 16.4 months (95% CI, 13.7-18.9 months)**

**Chemo: 10.5 months (95% CI, 8.8-12.6 months)**

**HR: 0.77 (95% CI, 0.51-1.17), P = 0.10404**

**Nonresponders  
PD + Not Assessed +  
Not Evaluable (N = 316)**



No. at risk	0	4	8	12	16	20	24	28	32	36
Pembrolizumab	166	91	49	28	20	15	14	6	2	0
Chemotherapy	150	63	26	16	15	8	5	3	1	0

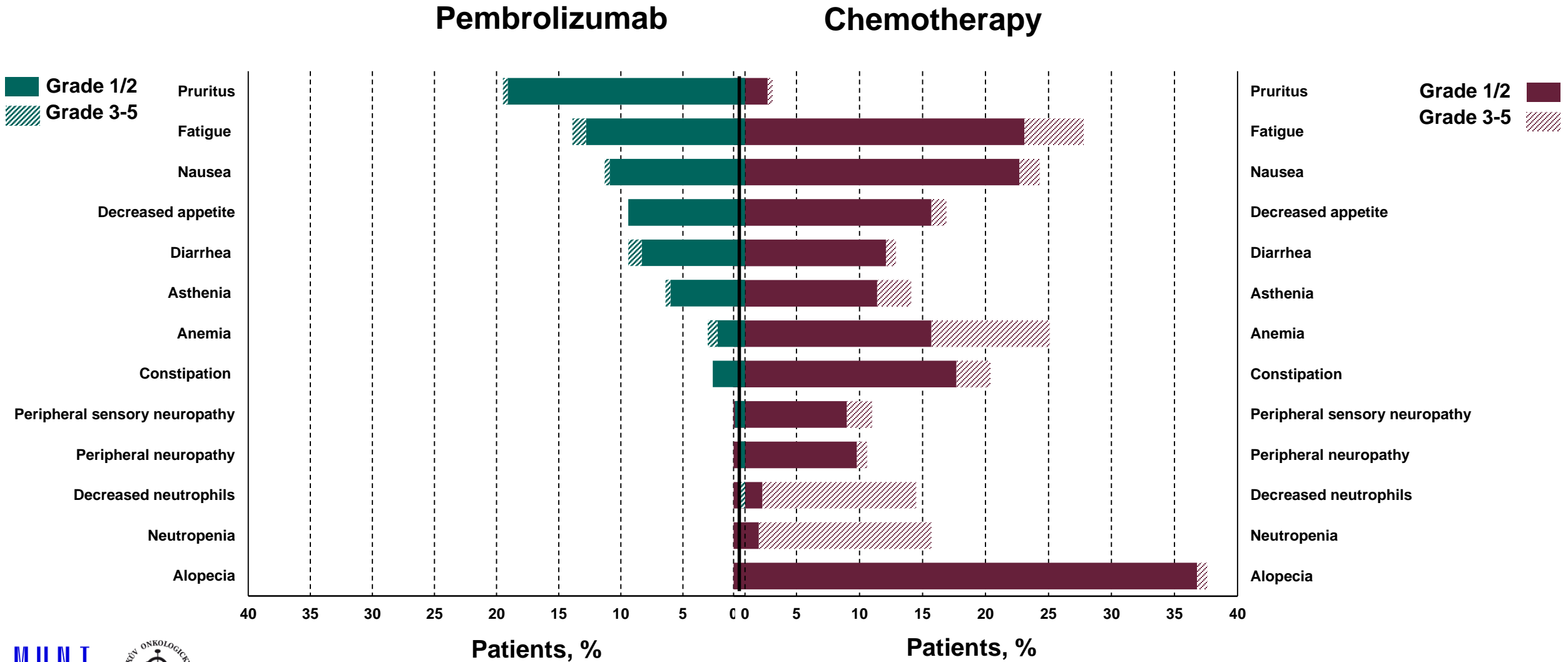
## Median OS

**Pembro: 4.7 months (95% CI, 3.9-5.9 months)**

**Chemo: 3.8 months (95% CI, 3.3-4.4 months)**

**HR: 0.85 (95% CI, 0.66-1.09), P = 0.09751**


# Nádory močového měchýře a pembrolizumab, druhá linie léčby mUC, KEYNOTE 045, NUL ( více než 10% pt)





# Erdafitinib for Urothelial Carcinoma

MULTICENTER, OPEN-LABEL, PHASE 2 STUDY



**210** Patients with locally advanced and unresectable or metastatic urothelial carcinoma with FGFR alterations

**Dose-Selection Phase**

<b>10 mg/day</b> (intermittently) (N = 33)	<b>6 mg/day</b> (continuously) (N = 78)
--	---

Interim analysis completed and regimen selected

Rate of confirmed response

Grade  $\geq 3$  adverse events

95% CI, 31–50

67%

Y. Loriot et al. 10.1056/NEJMoa1817323

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Liver	7/20	35 (14–56)
Lung	23/57	40 (28–53)
Lymph node only	4/12	33 (7–60)
Upper tract disease†	10/23	43 (23–64)
Lower tract disease‡	30/76	39 (29–51)
Absent	10/21	48 (26–69)
Response according to daily dose of erdafitinib — no./total no.		
8 mg	20/58	34 (22–47)
8 mg with dose escalation to 9 mg	20/41	49 (34–64)
Response according to genetic alteration — no./total no.		
FGFR3 mutation	36/74	49 (37–60)
FGFR2/3 fusion	4/25	16 (2–30)

## Erdafitinib THOR Phase 3 Trial Schema

### Key Inclusion Criteria:

- Locally advanced, unresectable or metastatic UC (minority component histologies allowed)
- FGFR inhibitor Clinical Trial Assay to determine molecular eligibility
- Only one line of prior systemic therapy
- ECOG PS 0, 1 or 2

Cohort 1 - Prior PD-1/PD-L1 treatment

Cohort 2 - No prior PD-1/PD-L1 treatment

**Primary Endpoint:** Overall survival

**Secondary Endpoints:** PFS, ORR, duration of response, safety, patient-reported outcomes, pharmacokinetics.

1:1

R  
A  
N  
D  
O  
M  
I  
Z  
E

Erdafitinib 8 mg po qd, N =140

Docetaxel or Vinflunine IV  
Day 1 of a 21-day cycle, N =140

1:1

R  
A  
N  
D  
O  
M  
I  
Z  
E

Erdafitinib 8 mg po qd, N =175

Pembrolizumab IV  
Day 1 of a 21-day cycle, N =175

PRESENTED BY: Evan Y. Yu, M.D.

16

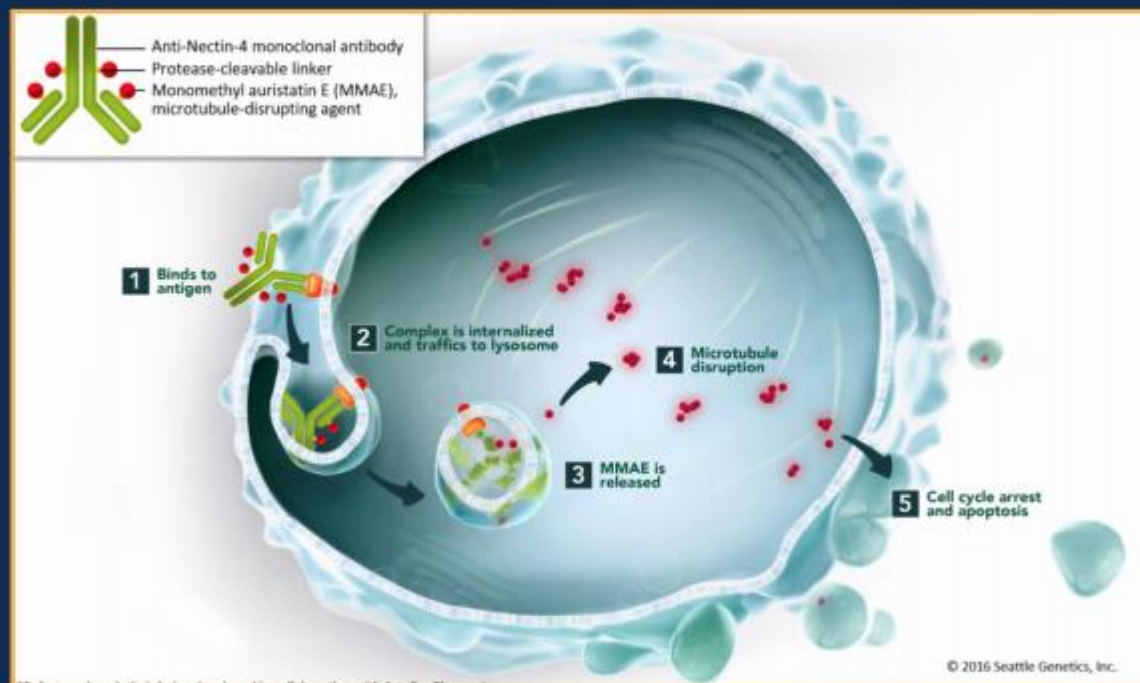
- Mediány PFS a OS z

,4 měsíce,

ěsíce

# Druhá a vyšší linie paliativní léčby, Enfortumab vedotin, PADCEV®

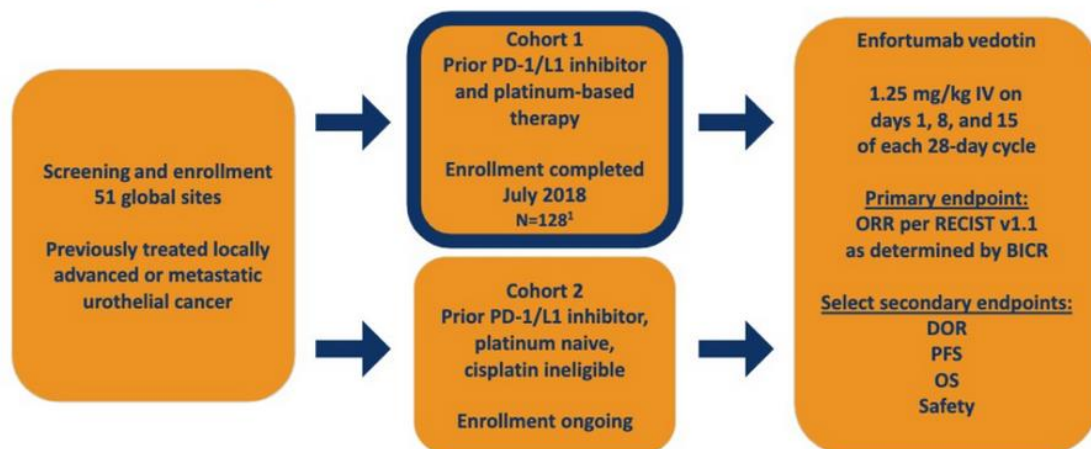
## Enfortumab Vedotin: Proposed Mechanism of Action



Enfortumab Vedotin is being co-developed by Seattle Genetics, Inc. and Astellas Pharma Inc.

# Druhá a vyšší linie paliativní léčby, Enfortumab vedotin, studie fáze II- kohorta 1 a 2 - po selhání imunoterapie s nebo bez předchozí chemoterapií

## EV-201: Single-Arm, Pivotal Phase 2 Trial



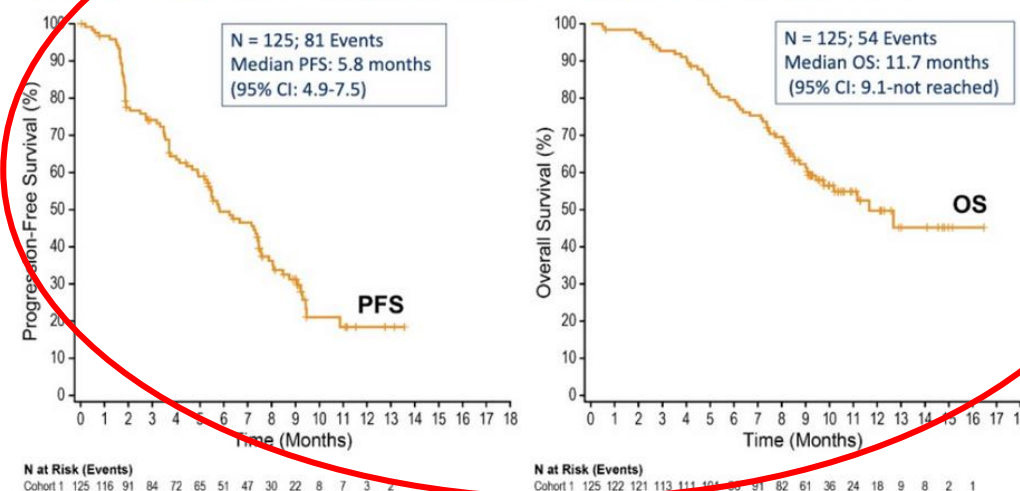
<sup>1</sup> 3 patients did not receive enfortumab vedotin treatment: one each due to clinical deterioration, patient decision, and low hemoglobin after enrollment

BICR=blinded independent central review; DOR=duration of response; ORR=objective response rate; OS=overall survival; PFS=progression-free survival

ORR per RECIST v 1.1 assessed by BICR	Patients (N=125) n (%)
Confirmed objective response rate	55 (44)
95% confidence interval <sup>1</sup>	(35.1, 53.2)
<b>Best overall response per RECIST v. 1.1, n (%)</b>	
Complete response	15 (12)
Partial response	40 (32)
Stable disease	35 (28)
Progressive disease	23 (18)
Not evaluable <sup>2</sup>	12 (10)

	Patients (N=125)
Male sex, n (%)	88 (70)
Age, years	
Median (min, max)	69 (40, 84)
≥75 years, n (%)	34 (27)
ECOG PS of 1, n (%)	85 (68)
Primary tumor location, n (%)	
Bladder/other	81 (65)
Upper tract	44 (35)
Number of prior systemic therapies <sup>1</sup> , median (range)	3 (1, 6)
≥2 Bellmunt adverse prognostic factors	52 (42)
Metastasis sites, n (%)	
Lymph nodes only	13 (10)
Visceral disease	112 (90)
Liver	50 (40)
PD-L1 status by combined positive score <sup>2</sup>	
<10	78/120 (65)
≥10	42/120 (35)

## EV-201: Cohort 1 Kaplan-Meier Estimates of Survival



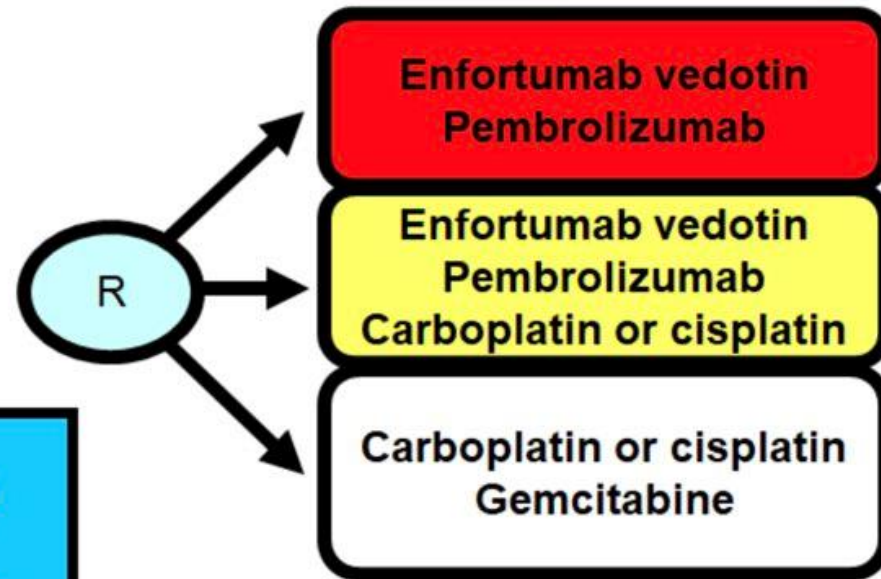
# Druhá a vyšší linie paliativní léčby, Enfortumab vedotin

Enfortumab vedotin and pembrolizumab with or without chemotherapy vs chemotherapy alone in advanced urothelial cancer (EV302).

- 03/vedpac
- Stumg,

NCT04223856

- Frist line advanced UC
- Performance status 0-2
- N=1095
- Endpoints=PFS and OS
- Open label
- Start date: March 2020



Enfortumab vedotin + Pembrolizumab „unfit“

HR 1,25

!!!, 53,7%

# Děkuji za pozornost

