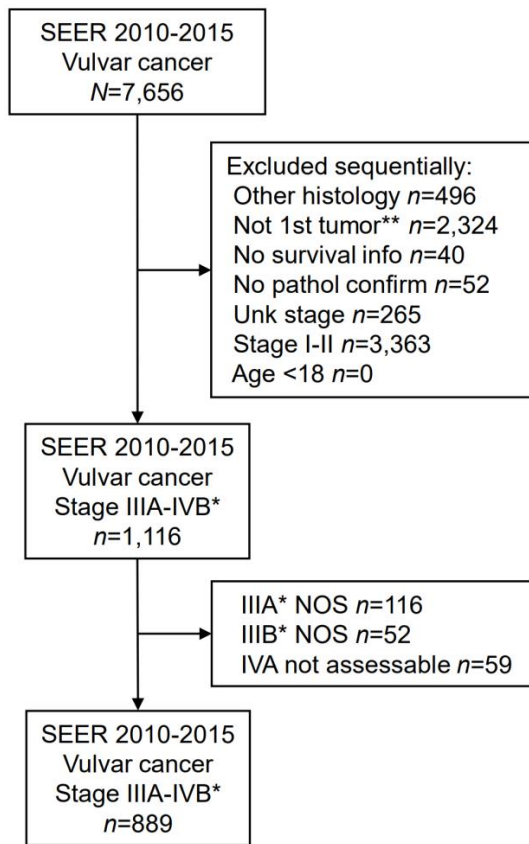


**Supplemental Figure S1. Study selection schema.**

\*Stage per the 2009 FIGO staging schema of vulvar cancer. \*\*including secondary primary cancer.

**Supplemental Table S1. 2021 FIGO cancer staging schema for advanced vulvar cancer.**

Stage	Tumor extension <sup>†</sup>
IIIA	Upper 2/3 urethra or vagina; bladder or rectal mucosa; regional nodal mets ≤5mm
IIIB	Regional nodal mets >5mm
IIIC	Regional nodal mets with extra-capsular spread
IVA	Fixed to pelvic bone; fixed or ulcerated regional nodal mets
IVB	Distant metastases

\*upper urethral, vaginal mucosa, bladder mucosa, or rectal mucosal invasion.

\*\*fixed to pelvic bone.

†Adopted and modified the original description.<sup>5</sup>

**Supplemental Table S2. AJCC 7th edition to FIGO stage.**

T	N	M	2009 FIGO	2021 FIGO
T1-2	N1a	M0	IIIA2	IIIA
T1-2	N1b	M0	IIIA2	IIIB
T1-2	N2a	M0	IIIB2	IIIA
T1-2	N2b	M0	IIIB1	IIIB
T1-2	N2c	M0	IIIC	IIIC
T3	-	M0	IVA1	IIIA or IVA*
-	N3	M0	IVA2	IVA
-	-	M1	IVB	IVB

\*CS extension was used to assess the tumor extension for T3 cases. Definition: N1a, 1-2 nodal metastasis (<5mm); N1b, 1 nodal metastasis (≥5mm); N2a, ≥3 nodal metastasis (<5mm); N2b, ≥2 nodal metastasis (≥5mm); and N2c, nodal metastasis with extra-capsule extension.

**Supplemental Table S3. Inter-stage comparison (overall survival) per the 2009 FIGO staging schema.**

	IIIA	IIIB	IIIC	IVA	IVB
IIIA		0.347	<0.001	<0.001	<0.001
IIIB			0.004	<0.001	<0.001
IIIC				0.377	<0.001
IVA					<0.001
IVB					

P-values are shown (log-rank test). Green color indicates statistically non-significant association between the two stage groups. Survival curves are shown in Figure 2A.

**Supplemental Table S4. Inter-stage comparison (overall survival) per the 2021 FIGO staging schema.**

	IIIA	IIIB	IIIC	IVA	IVB
IIIA		0.997	<0.001	<0.001	<0.001
IIIB			<0.001	<0.001	<0.001
IIIC				0.006	<0.001
IVA					0.221
IVB					

P-values are shown (log-rank test). Green color indicates statistically non-significant association between the two stage groups. Survival curves are shown in Figure 2B.