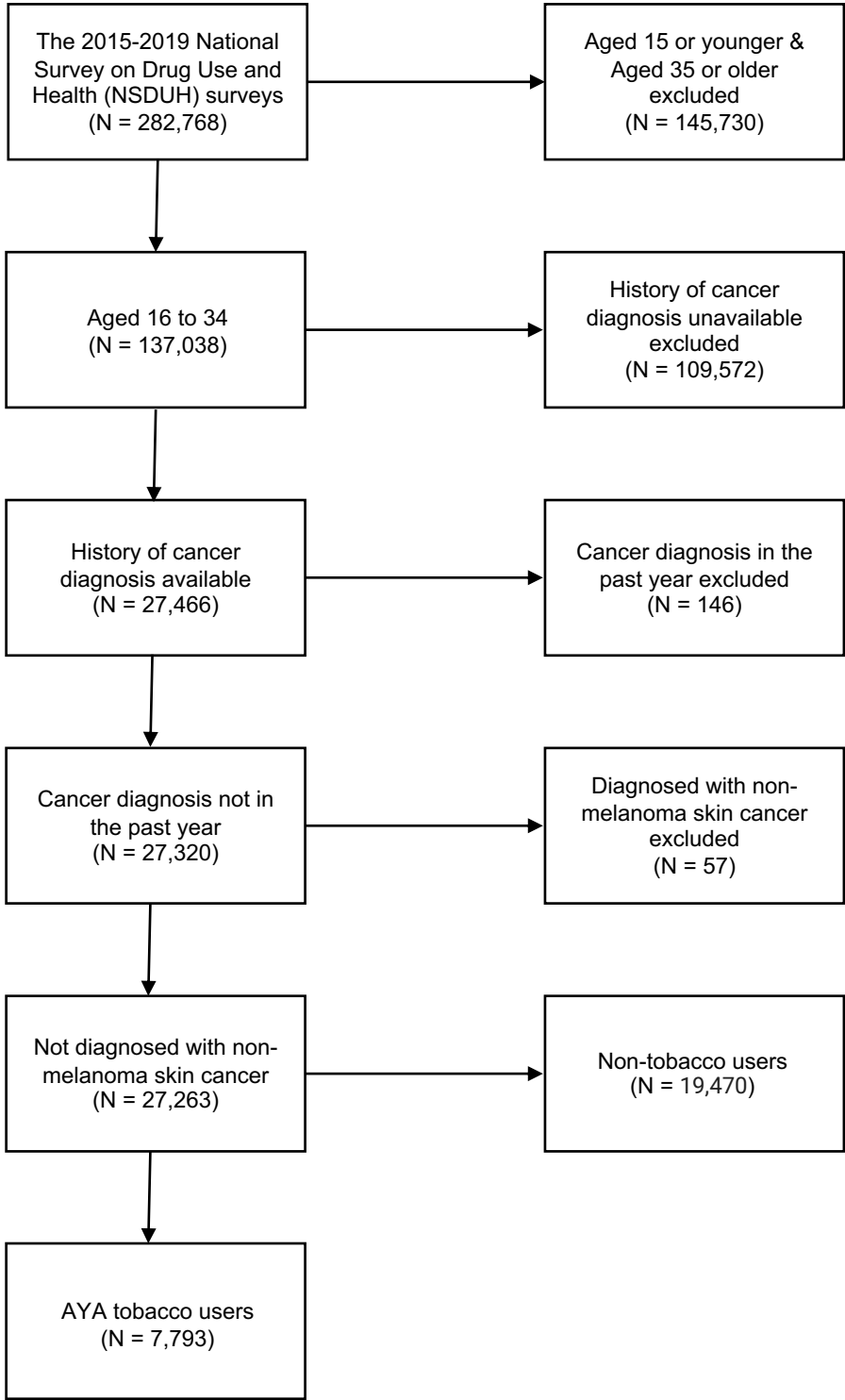


Supplemental Figure 1



Flow diagram of the cohort selection process

Supplemental Table 1. Overall Substance Use Prevalence among Adolescents and Young Adults with and without Cancer who use Tobacco				
	AYAs with Cancer (N = 228)	AYAs Comparison Group (N = 7565)	Overall (N = 7793)	
Characteristic	Unweighted N (Weighted %)	Unweighted N (Weighted %)	Unweighted N (Weighted %)	p-value
Cannabis Co-use				0.021
Used tobacco only	160 (71.2%)	4,622 (61.4%)	4,782 (61.7%)	
Used both tobacco and cannabis	68 (28.8%)	2,943 (38.6%)	3,011 (38.3%)	
Alcohol Co-use				0.151
Used tobacco only	77 (34.2%)	2,318 (29.3%)	2,395 (29.4%)	
Used both tobacco and alcohol	151 (65.8%)	5,247 (70.7%)	5,398 (70.6%)	
Illicit Drug Co-use				0.465
Used tobacco only	195 (86.3%)	6,415 (84.1%)	6,610 (84.2%)	
Used both tobacco and illicit drugs	33 (13.7%)	1,150 (15.9%)	1,183 (15.8%)	
Earliest Age of Tobacco Use				
Cigarettes				0.017
<=16	166 (72.2%)	4,671 (61.1%)	4,837 (61.5%)	
>16	62 (27.8%)	2,894 (38.9%)	2,956 (38.5%)	
Cigars				0.001
<=18	71 (30.1%)	3,421 (43.8%)	3,492 (43.3%)	
>18	157 (69.9%)	4,144 (56.2%)	4,301 (56.7%)	
Smokeless Tobacco				0.120
<=17	42 (16.8%)	1,865 (22.7%)	1,907 (22.5%)	
>17	186 (83.2%)	5,700 (77.3%)	5,886 (77.5%)	
Ever Use of Cannabis				0.434
Ever used	189 (82.4%)	6,341 (84.6%)	6,530 (84.6%)	
Never used	39 (17.6%)	1,224 (15.4%)	1,263 (15.4%)	
Ever Use of Alcohol				0.496
Ever used	223 (97.6%)	7,264 (96.7%)	7,487 (96.7%)	
Never used	5 (2.4%)	301 (3.3%)	306 (3.3%)	
Ever Use of Illicit Drug				0.937
Ever used	137 (60.4%)	4,436 (60.1%)	4,573 (60.1%)	
Never used	91 (39.6%)	3,129 (39.9%)	3,220 (39.9%)	
Past Year Substance Use Treatment				0.480
Never used alcohol or drugs	2 (4.8%)	142 (7.7%)	144 (7.6%)	
No	26 (43.3%)	672 (50.5%)	698 (50.2%)	
Yes	23 (51.8%)	597 (41.8%)	620 (42.2%)	
Past Year Cannabis Use				0.023
Used within the past year	96 (41.8%)	4,019 (52.6%)	4,115 (52.3%)	

	Did not use in the past year	132 (58.2%)	3,546 (47.4%)	3,678 (47.7%)	
Past Year Alcohol Use					0.798
	Used within the past year	198 (88.4%)	6,623 (87.8%)	6,821 (87.8%)	
	Did not use in the past year	30 (11.6%)	942 (12.2%)	972 (12.2%)	
Past Year Illicit Drug Use					0.564
	Used within the past year	71 (32.4%)	2,569 (34.3%)	2,640 (34.2%)	
	Did not use in the past year	157 (67.6%)	4,996 (65.7%)	5,153 (65.8%)	
Note. Tobacco use includes use of cigarettes, cigars, pipes, and/or smokeless tobacco. Bolded results represent associations significant at the $p < .05$ level.					

Supplemental Table 2. Weighted Univariable Logistic Regression Models of Co-use among Adolescents and Young Adults with and without Cancer who use Tobacco

		Model 1		Model 2		Model 3	
		Cannabis Co-use		Alcohol Co-use		Illicit Drug Co-use	
Characteristic		OR (95% CI)	<i>p</i> -value	OR (95% CI)	<i>p</i> -value	OR (95% CI)	<i>p</i> -value
AYA Group							
	AYAs comparison group	Ref		Ref		Ref	
	AYAs with cancer	0.64 (0.44, 0.94)	0.022	0.80 (0.58, 1.09)	0.151	0.84 (0.52, 1.35)	0.465
Age							
	16-20	Ref		Ref		Ref	
	21-25	0.72 (0.62, 0.84)	< 0.001	2.20 (1.85, 2.62)	< 0.001	1.06 (0.86, 1.30)	0.589
	26-34	0.46 (0.39, 0.54)	< 0.001	1.43 (1.23, 1.66)	< 0.001	0.69 (0.55, 0.86)	0.001
Sex							
	Male	Ref		Ref		Ref	
	Female	0.82 (0.71, 0.93)	0.004	0.72 (0.62, 0.83)	< 0.001	0.96 (0.82, 1.13)	0.640
Race/Ethnicity							
	Non-Hispanic Black	Ref		Ref		Ref	
	Non-Hispanic White	0.60 (0.49, 0.74)	< 0.001	0.88 (0.74, 1.06)	0.180	1.94 (1.47, 2.55)	< 0.001
	Hispanic	0.76 (0.57, 1.01)	0.062	0.98 (0.74, 1.29)	0.872	2.18 (1.47, 3.23)	< 0.001
	Other	0.78 (0.58, 1.04)	0.087	0.91 (0.69, 1.19)	0.475	1.99 (1.30, 3.07)	0.002
Insurance							
	Uninsured	Ref		Ref		Ref	
	Private insurance	0.69 (0.59, 0.81)	< 0.001	1.79 (1.45, 2.20)	< 0.001	0.76 (0.61, 0.96)	0.020
	Public insurance	0.73 (0.60, 0.90)	0.004	0.53 (0.43, 0.66)	< 0.001	0.79 (0.59, 1.05)	0.107
	Other insurance	0.85 (0.61, 1.19)	0.331	0.79 (0.56, 1.13)	0.190	0.51 (0.31, 0.86)	0.012
Education/Employment Status							
	No school & unemployed	Ref		Ref		Ref	
	No school (or part-time student) & employed full time	0.82 (0.69, 0.96)	0.018	2.80 (2.33, 3.36)	< 0.001	0.75 (0.61, 0.93)	0.009
	Full-time student & unemployed (or employed part-time)	1.70 (1.41, 2.06)	< 0.001	1.91 (1.51, 2.41)	< 0.001	1.16 (0.87, 1.53)	0.306
	Working and studying full time	1.26 (0.95, 1.67)	0.112	3.03 (2.10, 4.37)	< 0.001	1.11 (0.71, 1.73)	0.652
	Neither above	1.19 (0.99, 1.44)	0.061	1.64 (1.36, 1.99)	< 0.001	1.12 (0.85, 1.47)	0.412

Note. Tobacco use includes use of cigarettes, cigars, pipes, and/or smokeless tobacco. OR = Odds ratio; 95% CI = 95% confidence interval; Ref = Reference group; Bolded results represent associations significant at the $p < .05$ level. Marital Status, Sexual Orientation, Comorbidities, and Overall Health Status were adjusted for in the models.

Supplemental Table 3. Mental Health Status in AYAs with Cancer who Report Tobacco Use

			Tobacco and Cannabis			Tobacco and Alcohol			Tobacco and Illicit Drug		
		Overall (N=228)	Used tobacco and cannabis (N=68)	Used tobacco only (N=160)		Used tobacco and alcohol (N=151)	Used tobacco only (N=77)		Used tobacco and illicit drugs (N=33)	Used tobacco only (N=195)	
		Unweighted N (Weighted %)	Unweighted N (Weighted %)	Unweighted N (Weighted %)	<i>p</i> -value	Unweighted N (Weighted %)	Unweighted N (Weighted %)	<i>p</i> -value	Unweighted N (Weighted %)	Unweighted N (Weighted %)	<i>p</i> -value
Past Year Major Depressive Episode					0.345			0.863			0.035
	Yes	57 (24.7%)	23 (30.2%)	34 (22.5%)		42 (25.2%)	15 (23.8%)		15 (44.3%)	42 (21.6%)	
	No/Unknown	171 (75.3%)	45 (69.8%)	126 (77.5%)		109 (74.8%)	62 (76.2%)		18 (55.7%)	153 (78.4%)	
Nicotine Dependence					0.643			0.001			0.997
	Yes	83 (33.2%)	25 (36.3%)	58 (32.0%)		47 (24.4%)	36 (50.2%)		12 (33.3%)	71 (33.2%)	
	No/Unknown	145 (66.8%)	43 (63.7%)	102 (68.0%)		104 (75.6%)	41 (49.8%)		21 (66.7%)	124 (66.8%)	

Note. Tobacco use includes use of cigarettes, cigars, pipes, and/or smokeless tobacco. Bolded results represent associations significant at the $p < .05$ level.

