



# Cancer Facts

## Rural Poor

### WHO WE ARE

We are the rural poor and medically underserved living all across the U.S. We represent approximately 7.3 million individuals (or 15.1%) of the rural population in America compared to our 12.5% urban poor counterparts. In fact, our rural poverty rates have always been higher than those living in urban areas and are also considered “persistent”, meaning a consistently high poverty rate for more than 40 years.<sup>(1)</sup> This is due to many factors such as our isolation and sparse population, our limited economic opportunities, and our lower educational levels among our working adult population.

The majority of us are non-Hispanic/Latino white (66.3%) compared to those living in urban

areas (40.4%).<sup>(1)</sup> We tend to live in the South which has the highest poverty rate at 13.8 percent.<sup>(2)</sup> In the Appalachia region alone, we number more than 22 million people in 404 counties in 13 states between Southwestern New York and Mississippi. Central Appalachia includes the defined geographic area of West Virginia, and parts of Kentucky, Tennessee, Virginia, and Ohio where a higher proportion of the almost entirely non-Hispanic/Latino white, largely rural population is poor. The Appalachian region has traditionally experienced higher poverty rates, lower education levels, and limited access to health care compared to the nation as a whole. Approximately 65% of Appalachian

counties are rural: 42% of the region’s residents live in these rural counties. Furthermore, 108 of the 404 counties are categorized as distressed or severely distressed.

As rural individuals, we tend to be older, poorer, less educated, and more likely to be uninsured than our urban counterparts. As such, we have higher rates of chronic illness and disabilities and are overall in poorer health than our urban neighbors. Generally, we have less contact and fewer visits with physicians and, lower levels of preventive care. While poverty or low socioeconomic status has not been directly related to a higher incidence of cancer, research has shown that poverty has an adverse effect on cancer survival rates.<sup>(3)</sup>

### Causes/Etiology

- Women who live in Appalachia are at higher risk for cervical cancer than other U.S. women and, in particular, the rate of cervical cancer mortality in Appalachian Kentucky is the highest of the 13 Appalachian states, and about 50% higher than nationwide rates.<sup>(4,5)</sup>
- Research suggests that lung cancer mortality rate is higher in the coal-mining region of Appalachia. Risk factors such as smoking, mining, and also the correlation of poverty and low education all contribute to this data.<sup>(6)</sup>
- Major sources of employment in rural areas generally include agriculture, mining, and forestry, with a high potential for work-related injuries which raise the risk for cancer development.<sup>(7)</sup>

- Appalachians share similar values in terms of importance of family, religion, and home as do American Indian and Hispanic populations. Further, they also share problems such as low socioeconomic status, lack of access to health care, and low educational attainment.<sup>(8)</sup>
- Access issues for Appalachians include physicians who tend to leave for urban settings after short periods and who are not native to the area. This is further exacerbated with difficulty in understanding them and the likelihood of cultural miscommunication.<sup>(9)</sup>
- Appalachian geography isolates many smaller communities from cities and healthcare resources. Mountain chains, valleys and rivers often separate small communities and inhibit transportation to health facilities.<sup>(10)</sup>



## Screening

- Conflicting guidelines, time constraints, and perceptions that patients do not value prevention were reported as barriers to cancer screening by rural Appalachian patient care providers.<sup>(11)</sup>
- Hall et al. reported that the prevalence of recent mammography among women in Appalachia, which is largely rural, is lower than among other women in the United States.<sup>(12)</sup>
- Rural residence, geographic isolation, poverty, unemployment, lack of education, lack of child care services, and attitudinal and cultural factors may pose barriers to cancer screening among Appalachian women.<sup>(13)</sup>
- Breast cancer has more often been diagnosed at a late stage in rural Appalachia than elsewhere in the United States; this is mainly associated with an absence of screening.<sup>(14, 15)</sup>
- A study conducted of Appalachian women in West Virginia, reported that cost, fear, and embarrassment were identified as the top barriers to breast and cervical cancer screening.<sup>(16)</sup>
- Among Central Appalachian women, barriers to cervical cancer screening include fear of being subjected to medical scrutiny because of obesity or being a smoker, inadequate health care access, long travel time to medical services and clinic schedules that do not accommodate working women.<sup>(17)</sup>

## Patient/Provider Communication

- Stitzenberg et al. reported the distance a patient has to travel to see the doctor who diagnoses their melanoma, the more likely they are to have thicker and more lethal skin cancer at the time of diagnoses.<sup>(18)</sup>
- Rural surgeons are often uneasy when their outcomes are compared with those of urban surgeons, largely because they perceive that rural patients typically present with worse disease.<sup>(19, 20)</sup>

## Disparities

- Rural residents who are older, represent minorities, and are of low-income status use fewer medical screenings and early detection options available, leading to late diagnosis and increasing the mortality rate.<sup>(21)</sup>

- The disproportionately high cancer-related mortality rates still persist even though the economic state of many Appalachian counties have improved, recent findings demonstrate higher rates for selected types of cancers such as cervical, colorectal and lung.<sup>(22-24)</sup>
- Recent studies have identified higher rates of cancer and, in particular, cervical cancer; heart disease; and premature mortality in the Appalachian regional population.<sup>(25)</sup>
- Rural areas have the highest death rates for children and young adults with a 20% higher increase in lung and liver cancer compared to metropolitan areas.<sup>(26)</sup>
- Elderly Americans who live in low income, rural area have a 17%-39% higher chance of death after surgeries mainly due to the quality of care at lower end rural hospitals.<sup>(27)</sup>
- Geographical differences are seen in a pattern of excessive prostate cancer among African American/black males living in rural Southeastern United States, with a much greater prevalence among low socio-economic African American/blacks in that area.<sup>(28)</sup>
- Halverson's analysis reported that besides poor non Hispanic/White Appalachians, mortality rates for African American/blacks who also live in Appalachia exceeded national African American/black mortality rates.<sup>(29)</sup>

## Outcomes

- The lung cancer rate for Appalachian men was nearly 25% higher than the rate for men living in the rest of the US. The lung cancer rate for Appalachian women was 8% higher than the rate for women in the rest of the U.S.<sup>(30)</sup>
- From 2001-2003, Appalachian men and women had the highest incidence rates in all sites combined (415 per 100,000) when compared to the U.S. general population (398 per 100,000).<sup>(30)</sup>



- Couto et al. reported approximately 13% of Appalachians are considered to be medically indigent. The rate of mammography among Appalachian women was 3.2% lower than the national rate, and the Papanicolaou (Pap) test rate was 2.5% lower.<sup>(12, 31)</sup>
- Rural women in the United States have higher cervical cancer incidence rates. Among older women (aged 45–80 years) in whom half of cervical cancers occur, geographic differences largely disappear after controlling for poverty and race.<sup>(32)</sup>
- The cancer prevalence and mortality rates for the Appalachian region is much higher in rural Appalachia than all of Appalachia itself, with 176.3 per 100,000 compared to 173.1 to 100,000 of total Appalachia. It is also significantly higher than the national cancer death rate of 166.7 per 100,000.<sup>(33)</sup>

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