

# Oregon EIP Candidemia Surveillance



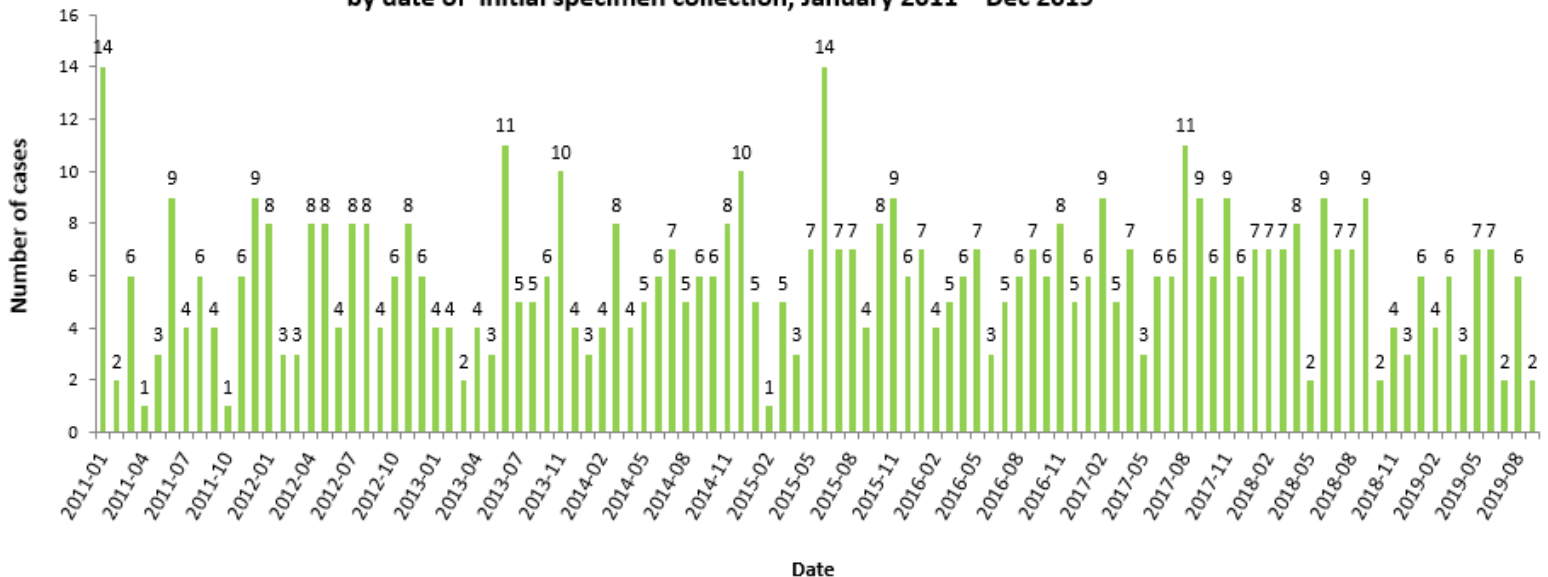
## December 2019 Surveillance Summary

The Oregon Emerging Infection Program (EIP) conducts laboratory and population-based surveillance for *Candida* spp. Bloodstream infections among residents of the tri-county (Clackamas, Multnomah, and Washington) Portland metropolitan area (2012 estimated population: 1,672,970). Oregon is one of four EIP sites participating in this surveillance project, with these objectives:

- To determine how many *Candida* bloodstream infections occurred in the surveillance area
- To describe people at risk for *Candida* bloodstream infections
- To identify which types of *Candida* cause illness
- To reveal trends of drug resistance

For more information about the EIP Candidemia surveillance project, see <http://www.cdc.gov/hai/eip/candida.html>

**Portland tri-county candidemia cases, by date of initial specimen collection, January 2011 – Dec 2019**



| Age group    | Female     |      | Male       |      | Deaths     | Total       |
|--------------|------------|------|------------|------|------------|-------------|
|              | n          | %    | n          | %    |            |             |
| <5           | 4          | 1.2  | 14         | 1.8  | 0          | 18          |
| 5–17         | 6          | 1.2  | 7          | 2.0  | 3          | 13          |
| 18–34        | 60         | 10.2 | 36         | 7.1  | 2          | 96          |
| 35–49        | 61         | 8.4  | 45         | 7.3  | 14         | 106         |
| 50–64        | 90         | 19.3 | 123        | 19.4 | 50         | 213         |
| 65–79        | 73         | 11.0 | 55         | 8.0  | 48         | 128         |
| ≥80          | 20         | 2.4  | 36         | 6.3  | 18         | 56          |
| <b>Total</b> | <b>314</b> |      | <b>316</b> |      | <b>135</b> | <b>630*</b> |

Since surveillance began in January 2011, 636 patients with *Candida* bloodstream infections have been reported in the Portland metropolitan area. Most infections (91%) occurred in people who were hospitalized. To date, EIP surveillance officers have reviewed the medical records of 519 cases. Of these cases:

- **58%** (n=363) had a central venous catheter in the previous 2 days
- **68%** (n=428) had received systemic antibiotics in the 2 weeks before their candidemia episode
- **21%** (n=116) died while hospitalized or within 30 days of candidemia
- **18%** (n=115) received TPN in the 14 days before illness onset
- **5%** (n=31) had been neutropenic in the previous 2 days

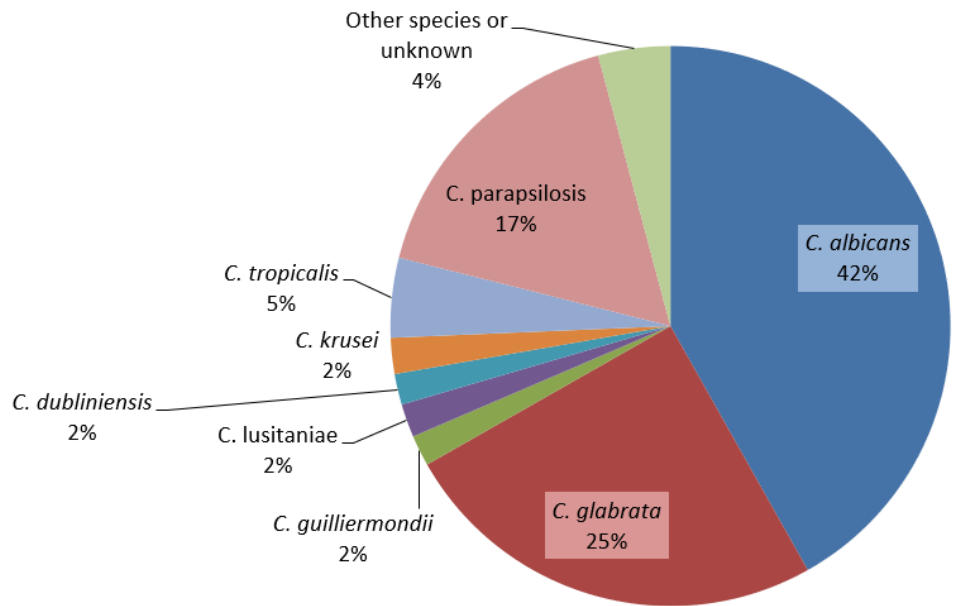
\* 6 cases pending full review

**Underlying conditions in past 90 days associated with candidemia cases, January 2011– December 2019, Portland tri-county area (n=630 with chart review completed)**

| Underlying condition                | n (% out of 630)   |
|-------------------------------------|--------------------|
| <b>Any cancer</b>                   | <b>104 (16.5%)</b> |
| <b>Diabetes</b>                     | <b>206 (32.7%)</b> |
| <b>HIV-related diagnoses</b>        | <b>9 (1.4%)</b>    |
| AIDS (CD4 count <200)               | 5 (0.8%)           |
| HIV infection without AIDS          | 4 (0.6%)           |
| <b>Any Liver Diagnoses</b>          | <b>132 (21.0%)</b> |
| Hepatitis C                         | 96 (15.2%)         |
| <b>Organ transplant</b>             | <b>9 (1.4%)</b>    |
| <b>Pancreatitis</b>                 | <b>11 (1.7%)</b>   |
| <b>Any surgery in 90 days prior</b> | <b>178 (28.2%)</b> |
| Abdominal surgery                   | 72 (11.4%)         |
| <b>IV drug use</b>                  | <b>165 (26.2%)</b> |

The charts to the right displays the distribution of *Candida* species found in blood isolates from candidemia cases. Currently, 12 different species of *Candida* have been isolated from blood since January 2011. Of the 674 isolates, 282 isolates were *C. albicans* (42%). The second most common isolate was *C. glabrata* (n=168, 25%) and the third most common isolate was *C. parapsilosis* (n=114, 17%). These three isolates contains 84% (n=564) of the known *Candida* blood isolates from the tri-county area from 2011-2019. *Candida albicans* has been the dominant species isolated from bloodstream infections in the tri-county area since the inception of the Oregon EIP candidemia surveillance in 2011. Since 2011, the number isolates of *Candida glabrata* has been increasing and we have seen an increase in other species of *Candida*. We have seen an increase in the number of *Candida tropicalis* isolates as well as *Candida*

***Candida* blood isolates by species, Oregon, January 2011 - December 2019 (674 isolates)**



***Candida* blood isolates by species and year, Oregon January 2011—December 2019**

