Disease Activity and Anti-VEGF Treatment Patterns in a Commercially Insured US Patient Population with Neovascular Age-Related Macular Degeneration

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Purpose:
To assess choroidal neovascularization (CNV) activity and anti-vascular endothelial growth factor (aVEGF) treatment patterns among patients with neovascular age-related macular degeneration (nAMD) in US clinical practice.

Methods:
Using the PharMetrics? Plus database, patients with incident nAMD aged = 50 years with commercial insurance, =1 of nAMD diagnosis claim, and =18 months of follow-up post diagnosis were identified between October 2015-August 2018. Patient eyes were stratified by disease status at the time of diagnosis (active CNV, inactive/quiescent CNV, inactive scar) based on ICD-10-CM codes. Kaplan Meier analysis was used to measure time from active CNV to inactive CNV or inactive scar. aVEGF treatment patterns were analyzed among a subgroup of patients receiving treatment and with =12 months of follow-up post-initial treatment.

Results:
Active CNV was found in 45% (n=570/1270) of nAMD eyes at baseline and among these, 28% (n=160) experienced a transition in status over follow-up. Among eyes presenting with active CNV, 19.8% (n=113) transitioned to inactive CNV with a median transition time of 6.6 months. In eyes presenting with inactive CNV, 16.9% (n=54/320) subsequently transitioned back to active CNV. Annual nAMD-related outpatient healthcare resource utilization was substantially higher for patients with active CNV (mean [standard deviation (SD)]) visits = 6.2, SD=4.6) compared with inactive/quiescent CNV (mean [SD] = 2.7 [2.5]). 427 patients were included in the aVEGF treatment patterns analysis. Of these, the majority were treated with bevacizumab (71%), followed by aflibercept (20%) and ranibizumab (9%). Over the first year, patients received a mean (SD) of 5.2 (3.5) injections; mean (SD) duration of aVEGF therapy (time from diagnosis to last observed aVEGF injection) was 6.2 (4.7) months across agents. Treatment disruption (>18-week gap in any aVEGF therapy) was observed in 66% of patients. Treatment disruption in index aVEGF therapy was seen at a higher rate in patients initiating treatment with bevacizumab (72%), compared with ranibizumab (52.5%) or aflibercept (52.4%).

Conclusions:
In a real-world setting, active CNV is the most common presenting diagnosis and transition to an inactive/quiescent status is limited. Similar to previous studies, overall rates and frequency of aVEGF treatment in this commercially insured population remains low compared with clinical trials.