

A comparison of the street price of original and reformulated OxyContin® and immediate release (IR) oxycodone products

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Introduction

Reformulated OxyContin® (oxycodone HCl controlled release ORF), introduced in August 2010, is intended to deter abuse through routes that require tampering.

Objective

- To determine if the street price per milligram of ORF was less than the street price of original formulation OxyContin and immediate release (IR) oxycodone products.
- To determine if the street price of original formulation OxyContin and IR oxycodone increased following the introduction of ORF.

Methods

- The Researched Abuse, Diversion and Addiction-Related Surveillance (RADARS®) System Drug Diversion program began collecting data in 2002. Approximately 300 drug diversion officers across all 50 states and Puerto Rico submit data quarterly on the number of documented drug diversion cases within their jurisdiction.
- Street price data have been collected as part of the RADARS System Drug Diversion program since the 1st quarter of 2010, excluding the 2nd quarter of 2010. Street price data included data from cases, informants and prices paid during drug “sting” operations. Figure 1 displays the 3-digit ZIP codes where information on the three drug products were collected. A total of 774 reports from 114 agencies were received on the three drug groups.
- Comparisons were conducted using a repeated measures analysis of variance of the natural log street price per milligram (mg). An exchangeable correlation structure was imposed within reporting agencies and drug formulation to account for correlations among street price reports.
- Prices were compared across drug formulation and time period. Time periods were defined as:
 - Before introduction of ORF was 2010 Q1
 - Transition to ORF was 2010 Q3 through 2010 Q4
 - After transition to ORF was 2011 Q1 through 2011 Q4

Results

Figure 1. Locations of street price reports for OxyContin and IR Oxycodone. Blue regions represents respondent 3-digit ZIP code.

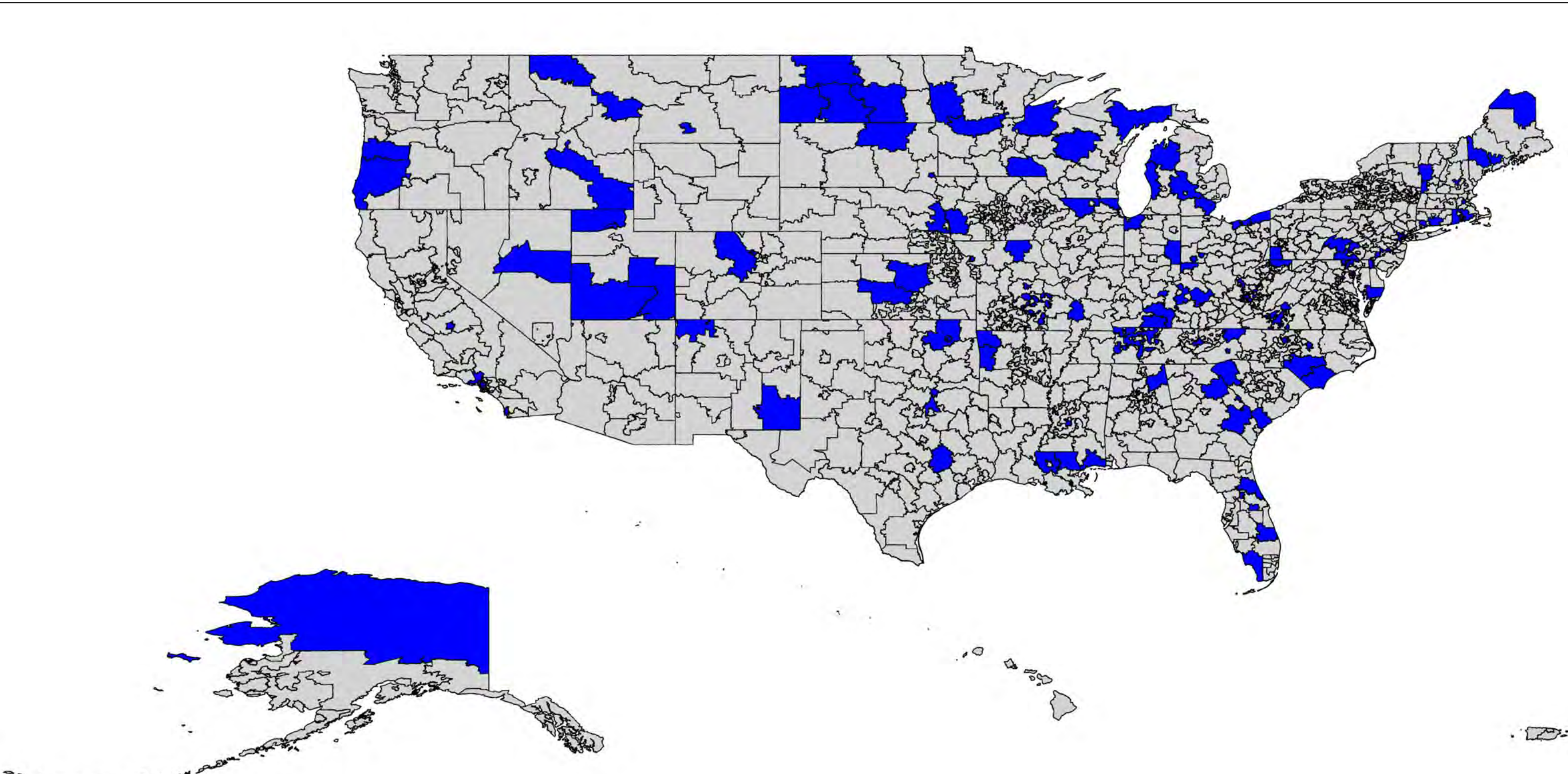
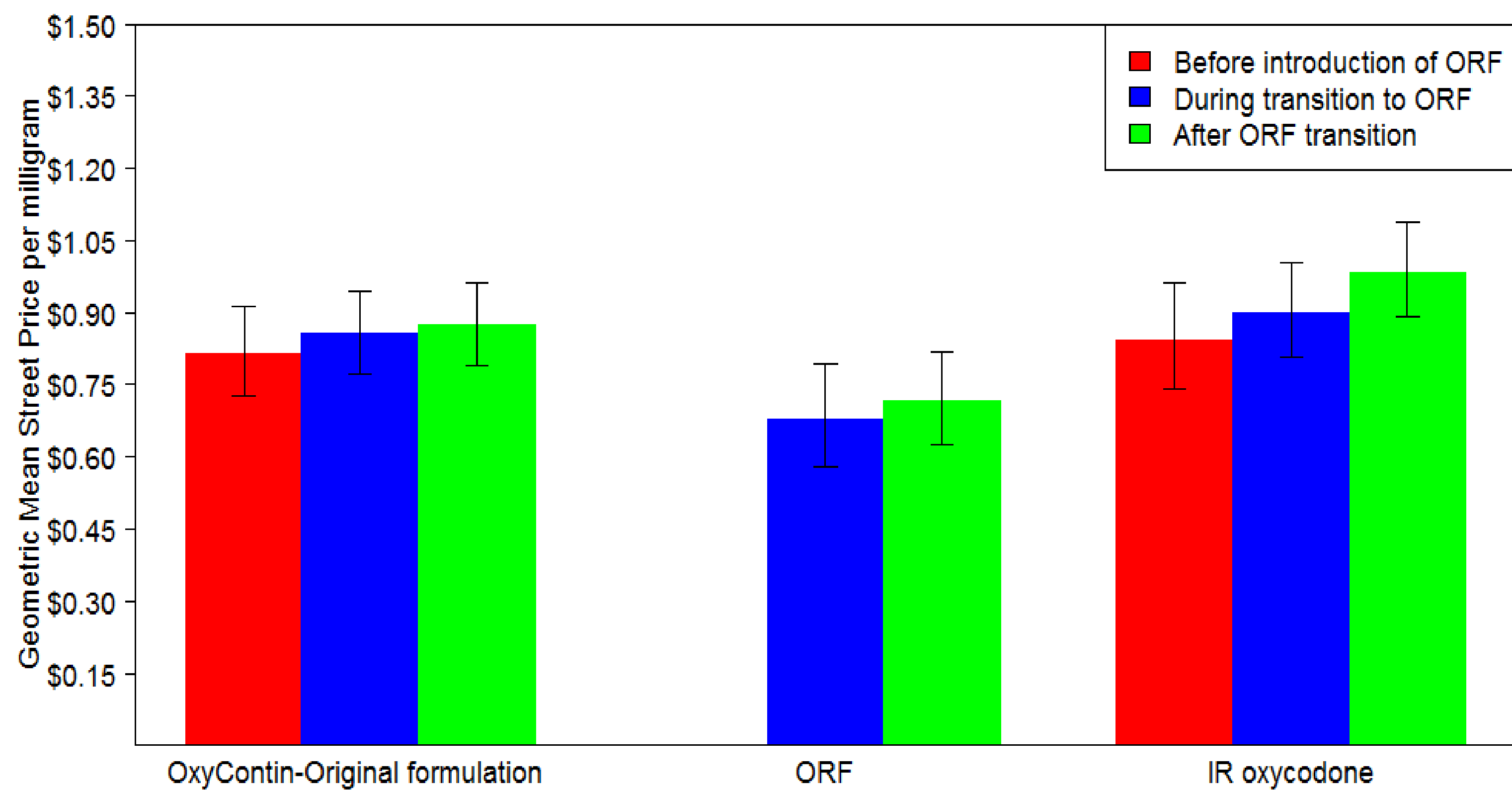


Figure 2. Geometric mean street prices per mg and 95% confidence intervals estimated using repeated measures ANOVA by drug product and time period from 1Q 2010 through 4Q 2011.



- Figure 2 displays the geometric mean street prices at each time period. Prices for ORF per mg appear to be lower during and after transition to ORF than original formulation OxyContin and IR oxycodone.
- The geometric mean street price for the old formulation appears to remain relatively stable before, during, and after transition to ORF. IR oxycodone appears to increase from around \$0.80 per mg to about \$1.00 per mg after transition to ORF.

Results (continued)

Table 1. Select comparisons and percent differences calculated from repeated measures ANOVA.

Geometric means compared		Percent difference (p-value)
OxyContin-original formulation – After ORF transition	OxyContin-original formulation - Before ORF introduction	7.1% (p =0.179)
IR oxycodone- After ORF transition	IR oxycodone- Before ORF introduction	16.6% (p=0.006)
ORF- After ORF transition	OxyContin-original formulation - After ORF transition	-18.8% (p=0.023)
ORF- After ORF transition	IR oxycodone- After ORF transition	-27.2% (p=0.001)

- Results of mean comparisons within the repeated measures analysis of variance are **displayed in table above**.
- The street price per mg of original formulation OxyContin and IR oxycodone showed modest increases. IR oxycodone was statistically significant.
- ORF price per mg after the transition period are significantly less than (p=.021) than original formulation of OxyContin and IR oxycodone (p=0.001).

Conclusions

- The geometric mean street price of the new formulation was 18.8% lower than the street price of the old formulation in the post introduction of ORF time period.
- The observed differences suggest that following the introduction of ORF, the street price for IR oxycodone products has increased 16.6%.
- The findings suggest that there is less demand for ORF through illegal channels than the original formulation of OxyContin. There may also be increases in demand for other oxycodone products.
- However, price is determined by supply and demand of a product and the relative roles of each factor in the price changes caused by the introduction of ORF is unknown.

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