

**IN THE COURT OF APPEALS
STATE OF ARIZONA
DIVISION ONE**

MICHAEL FLOYD GUTHRIE,)	1 CA-SA 01-0312
)	
Petitioner,)	DEPARTMENT B
)	
v.)	
)	O P I N I O N
THE HONORABLE MICHAEL D. JONES, Judge)	
of the SUPERIOR COURT OF THE STATE OF)	Filed 4-4-02
ARIZONA, in and for the County of)	
MARICOPA,)	
)	
Respondent Judge,)	
)	
STATE OF ARIZONA,)	
)	
Real Party in Interest.)	
)	

Petition for Special Action
from the Maricopa County Superior Court

Cause No. LC 2001-000121

Tempe Municipal Court No. 00-407997-2

The Honorable Michael D. Jones, Judge

JURISDICTION ACCEPTED; RELIEF GRANTED IN PART; REMANDED

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F I D E L, Judge

¶1 In order to support a charge of "traditional DUI," the State must prove that a defendant was driving or in physical

control of a vehicle “[w]hile under the influence of intoxicating liquor.” See A.R.S. § 28-1381(A)(1) (1998). In contrast, to support a charge of “per se DUI,” the State need not prove that the defendant was under the influence while driving or controlling a vehicle; it suffices to prove that, within two hours of driving or controlling a vehicle, the defendant had an alcohol concentration at or exceeding the statutorily determined rate. See A.R.S. § 28-1381(A)(2) (1998).

¶2 In this special action, we consider whether evidence regarding breath-to-blood partition ratios is relevant to a prosecution for either crime. Differentiating the two, we conclude that such evidence is not relevant to a prosecution for per se DUI, but may be relevant to a prosecution for traditional DUI if, in the latter instance, the State introduces evidence of the defendant’s breath alcohol level to support conviction.

I. BACKGROUND

¶3 On February 12, 2000, Michael Floyd Guthrie was charged with driving under the influence of intoxicating liquor in violation of A.R.S. § 28-1381(A)(1) and driving with an alcohol concentration greater than .10 within two hours of driving in violation of A.R.S. § 28-1381(A)(2).¹ On the morning of trial, the

¹ The legislature later amended the statute to prohibit driving with an alcohol concentration greater than .08 within two hours of driving or being in actual physical control of a vehicle. A.R.S. § 28-1381(A)(2) (Supp. 2001). Our analysis is equally applicable to the amended statute as to its predecessor.

municipal court granted the State's motion to preclude Guthrie from eliciting testimony regarding breath-to-blood partition ratios. Guthrie then waived his right to a jury trial, and the trial court found him guilty on both counts. He appealed to the superior court, asserting that the municipal court erred in its partition ratio ruling. The superior court affirmed, and Guthrie now seeks special action relief.

¶4 We accept jurisdiction because Guthrie presents a question of law; one of first impression; one upon which lower courts, lacking appellate guidance, have rendered inconsistent judgments; and one for which he has no remedy by appeal. See, e.g., *Holt v. Hotham*, 197 Ariz. 614, 615, ¶ 4, 5 P.3d 948, 949 (App. 2000). Guthrie has no remedy by appeal because when, as here, the superior court has acted as an appellate court, subsequent appeals to this court are only allowed "if the action involves the validity of a tax, impost, assessment, toll, municipal fine or statute." A.R.S. § 22-375(A) (1990). Because Guthrie does not question the validity of the statutes under which he was convicted, a special action is his only means to seek relief.

II. RELEVANCE

¶5 Partition ratios translate the amount of alcohol in a person's breath into the amount of alcohol in that person's blood. Alcohol in the breath does not cause impairment; impairment results when alcohol enters the body, is absorbed into the bloodstream, and

is transported to the central nervous system and the brain. Although it is thus a blood alcohol reading, not a breath alcohol reading, that establishes whether a person is impaired, breath alcohol readings nonetheless indicate blood alcohol levels, and taking a breath sample is easier and less intrusive than taking a blood sample.

¶6 After researchers determined that the percentage of alcohol in 100 milliliters of blood could be equated to the percentage of alcohol in 210 liters of breath,² our legislature adopted a 2100:1 ratio of breath-to-blood alcohol. See 1988 Ariz. Sess. Laws, ch. 246, § 3. The Intoxilyzer 5000 machine used to test Guthrie's breath issued a reading based on the 2100:1 ratio. Rather than determining the percentage of alcohol in 100 milliliters of Guthrie's blood (blood alcohol concentration), it told investigators the number of grams of alcohol in 210 liters of Guthrie's breath (breath alcohol concentration). See *State ex rel. Dean v. City Court of Tucson*, 163 Ariz. 510, 512, 789 P.2d 180, 182 (1990).

¶7 Like much in science and law, the 2100:1 breath-to-blood alcohol ratio is an estimation. The actual ratio of an

² See generally Jefferson Lankford, *Arizona DUI: A Manual for Police, Lawyers, and Judges* 100-01 (2001-2002 ed.); Stephen G. Thompson, *The Constitutionality of Chemical Test Presumptions of Intoxication in Motor Vehicle Statutes*, 20 San Diego L. Rev. 301, 326-30 (1983); 2 Richard E. Erwin, *Defense of Drunk Driving* § 15.02, at 15-10 (3d ed. 2000).

individual's breath-to-blood alcohol level varies. As the Lankford *DUI Manual* explains:

The breath test assumes that the alcohol content of the breath is in the same proportion as alcohol in the blood. That assumption is based on "Henry's law," a scientific law that when a gas and liquid are in a closed container, the concentration of the gas in the air above the liquid will be proportional to the concentration of the gas dissolved in the liquid. The ratio between the two is called "Henry's constant," or the "partition ratio." In forensic science, this is also referred to as the "blood-breath partition coefficient."

The problem with the partition ratio is that the human body is complex, and does not act exactly like a closed container in a laboratory. While for forensic purposes the partition ratio is set at 2100:1 (the alcohol concentration in the blood is 2100 times greater than that in the breath), there is variation among individuals. "This ratio has been found to vary under the influence of multiple factors including the subject's body temperature, phase of alcohol metabolism, ventilation-perfusion abnormalities, ethanol in the mouth, and regurgitation of alcoholic stomach contents."

Lankford, *supra* note 2, at 100-01 (footnotes omitted) (quoting Keim, et al., *Accuracy of an Enzymatic Assay Device for Serum Ethanol Measurement*, 37 *Clinical Toxicology* 75, 78 (1999)).

¶8 Other variables include gender, blood consistency, breathing patterns, and environmental factors such as barometric pressure and elevation above sea level. See Thompson, *supra* note 2, at 327-30; Erwin, *supra* note 2, § 21.01, at 21-3. According to a study that Guthrie cited to the municipal court, statistically

significant differences from the 2100:1 standard breath-to-blood ratio may be found within 16% of the population.

¶9 The municipal court nonetheless precluded Guthrie from undertaking to establish that his partition ratio on the date in question varied significantly from the norm. And the superior court upheld that ruling, stating, "Given the 1998 amendment to the DUI statutes, which changed the definition of alcohol content to breath alcohol or blood alcohol, it is difficult to see the relevance of [Guthrie's] proffered testimony."

A. Relevance to Per Se DUI

¶10 The municipal court correctly found the evidence irrelevant to the "per se" DUI charge, the charge that Guthrie had violated A.R.S. § 28-1381(A)(2). The statute in effect in February 2000 prohibited a person from driving or physically controlling a vehicle if the person had "*an alcohol concentration* of 0.10 or more within two hours of driving or being in actual physical control of the vehicle." A.R.S. § 28-1381(A)(2) (1998) (emphasis added). A related statute defined "alcohol concentration," when expressed as a percentage, as *either* "[t]he number of grams of alcohol per one hundred milliliters of blood" or "[t]he number of grams of alcohol per two hundred ten liters of breath." A.R.S. § 28-101(2) (1998). The statutes thus permitted either a breath alcohol reading or a blood alcohol reading to establish the element of alcohol concentration without regard to the question how the former might

be converted to the latter. In short, because it was illegal to drive or physically control a vehicle if, according to a test within two hours, the number of grams of alcohol per 210 liters of breath exceeded .10, it was irrelevant under § 28-1381(A)(2), when a defendant had a breath alcohol reading exceeding .10 grams per 210 liters, whether a 2100:1 ratio would accurately establish the defendant's blood alcohol level at the time of the test.

¶11 The California Supreme Court reached a similar conclusion when interpreting California's "per se" DUI statute. Holding evidence of the variability of partition ratios irrelevant to a prosecution under California Vehicle Code § 23152(b) (1992), the court stated, "the legislature intended the statute to criminalize the act of driving either with the specified blood-alcohol level or with the specified breath-alcohol level." *People v. Bransford*, 884 P.2d 70, 72 (Cal. 1994). We similarly interpret our legislature's intent in enacting A.R.S. § 28-1381(A)(2).

B. Relevance to Traditional DUI

¶12 Guthrie, however, was not only charged with per se DUI under A.R.S. § 28-1381(A)(2), but with traditional DUI under A.R.S. § 28-1381(A)(1). Specifically, the latter statute prohibits driving "[w]hile under the influence of intoxicating liquor . . . if the person is impaired to the slightest degree."

¶13 Under subsection (A)(1), the State need not prove that a defendant's alcohol concentration was at or above any particular

level; it need prove only that the defendant was "impaired to the slightest degree" as a result of being "under the influence of intoxicating liquor." The State may elect, however, to establish alcohol concentration in order to take advantage of a statutory presumption. At the time of Guthrie's offense, the presumption was that, if an "analysis of a defendant's blood, breath or other bodily substance" reveals that "there was . . . 0.10 or more alcohol concentration in the defendant's blood, breath or other bodily substance [within two hours of driving], . . . the defendant was under the influence of intoxicating liquor." A.R.S. § 28-1381(H) (3) (1998). The legislature has since substituted 0.08 for 0.10 alcohol concentration. See A.R.S. § 28-1381(G) (Supp. 2001).

¶14 We come then to the question whether, when the State elects to employ breath test results to presumptively establish that a defendant was "under the influence" while driving, the defendant may respond by introducing partition ratio evidence to counter the presumption. We answer that question in the affirmative.

¶15 We note that the statute itself provides a defendant the opportunity to introduce evidence to counteract the presumption. Although the presumptive correlation between breath alcohol and impairment was embodied, at the time of Guthrie's offense, in A.R.S. § 28-1381(H), the statute further stated in subsection I that subsection H "does not limit the introduction of any other

competent evidence bearing on the question of whether or not the defendant was under the influence of intoxicating liquor.”³

¶16 One means to prove that a particular defendant was not under the influence of intoxicating liquor while driving, despite a breath alcohol reading exceeding .10, is to establish that the defendant’s individual partition ratio differed from the standard 2100:1 ratio to a significant degree. The assumption that the number of grams of alcohol in 210 liters of a person’s breath is equal to the percentage of alcohol in 100 milliliters of his blood “is subject to variation between individuals and even for the same individual at different times.” Erwin, *supra* note 2, at 15-10. Thus, evidence that a particular defendant’s ratio is significantly greater is relevant, for it would have a tendency to rebut the presumption that the defendant was “under the influence” at a certain breath alcohol concentration. See Ariz. R. Evid. 401 (evidence is relevant if it has “any tendency to make the existence of any fact that is of consequence to the determination of the action more probable or less probable than it would be without the evidence”).

¶17 The Vermont Supreme Court has reached a similar conclusion. In *State v. Hanks*, 772 A.2d 1087, 1088 (Vt. 2001), the defendant was charged with driving under the influence of intoxicating liquor. The state introduced the defendant’s breath

³ See revised A.R.S. § 28-1381(G), (H) (Supp. 2001).

test results to take advantage of a "permissive inference" in the Vermont statute that, "[i]f the person's alcohol concentration . . . was 0.08 or more . . . the person was under the influence of intoxicating liquor." *Id.*; Vt. Stat. Ann. tit. 23, § 1204(a)(2). When arrested, the defendant exhibited few if any visible signs of impairment, *Hanks*, 772 A.2d at 1092, and thus the test results and the permissive inference were important to the state's case. The trial court, as here, precluded the defense from eliciting testimony regarding variations in individual partition ratios. *Id.* at 1090. The Vermont Supreme Court reversed, holding that "such evidence was unquestionably relevant because it had some tendency to explain the alleged inconsistency between defendant's condition and the test result." *Id.* at 1092. In so holding, the court specifically distinguished *Bransford* as a case focusing solely on the "per se" DUI charge rather than the "traditional" charge. *Id.* at 1093.

III. CONCLUSION

¶18 In a per se DUI prosecution under A.R.S. § 28-1381(A)(2), evidence of variation in individual partition ratios is irrelevant and inadmissible. In a traditional DUI prosecution under § 28-1381(A)(1), however, when the State uses breath test results to take advantage of the § 28-1381(H) (now § 28-1381(G)) presumption, partition ratio evidence may be relevant to rebut that presumption and thus admissible. We therefore deny Guthrie relief from his

conviction under § 28-1381(A)(2) but grant him relief from his conviction under § 28-1381(A)(1). Specifically, finding that the municipal court erred by precluding Guthrie's effort to establish that his particular partition ratio on the date in question differed significantly from the norm, we vacate the latter conviction and remand for further proceedings consistent with this opinion.

NOEL FIDEL, Judge

CONCURRING:

REBECCA WHITE BERCH, Presiding Judge

WILLIAM F. GARBARINO, Judge